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Councilmember, Imperial Beach
(Representing South County)

Victor Carrillo, Vice Chair
Chairman, Imperial County
(Representing Imperial County)

David Allan
Vice Mayor, La Mesa
(Representing East County)

Greg Cox
Chair Pro Tem, County of San Diego

Shari Mackin
Deputy Mayor, Oceanside
(Representing North County Coastal)

Pia Harris-Ebert
Vice Mayor, San Marcos
(Representing North County Inland)

Ben Hueso
Councilmember, City of San Diego

Alternates

Phil Monroe
Councilmember, Coronado
(Representing South County)

David Ouzan
Councilmember, Calexico
(Representing Imperial County)

Jillian Hanson-Cox
Councilmember, El Cajon
(Representing East County)

Pam Slater-Price
Supervisor, County of San Diego

Henry Abarbanel
Councilmember, City of Del Mar
(Representing North County Coastal)

Ed Gallo
Mayor Pro Tem, Escondido
(Representing North County Inland)

Brian Maienschein
Councilmember, City of San Diego

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Councilmember, City of Lake Elsinore
(Representing Riverside County)

Debbie Cook
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Luis Cabrera C.
Consul General, Consulate General of Mexico

Howard Williams
San Diego County Water Authority

Pedro Orso-Delgado
District 11 Director, Caltrans

Robert Smith
Chairman of the Board, Southern California Tribal Chairmen’s Association

Gary L. Gallegos
Executive Director, SANDAG

AGENDA HIGHLIGHTS

- CALIFORNIA BIODIVERSITY COUNCIL MEETING TO DISCUSS NATURAL RESOURCES ALONG THE BORDER
- OTAY MESA-MESA DE OTAY BINATIONAL CORRIDOR STRATEGIC PLAN: DRAFT FINAL EARLY ACTION PLAN
- CHARTER FOR INTERAGENCY TECHNICAL WORKING GROUP ON TRIBAL TRANSPORTATION ISSUES
- 2007 REGIONAL TRANSPORTATION PLAN (RTP) WHITE PAPER: CROSSBORDER TRANSPORTATION

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YOU CAN LISTEN TO THE BORDERS COMMITTEE MEETING BY VISITING OUR WEB SITE AT WWW.SANDAG.ORG

MISSION STATEMENT

The Borders Committee provides oversight for planning activities that impact the borders of the San Diego region (Orange, Riverside, and Imperial Counties and the Republic of Mexico). The preparation and implementation of SANDAG’s Binational Planning and Interregional Planning Programs are included under its purview. It advises the SANDAG Board of Directors on major interregional planning policy-level matters.
Welcome to SANDAG. Members of the public may speak to the Borders Committee on any item at the time 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/Member Comments. Speakers are limited to three minutes. The Borders Committee may take action on any item appearing on the agenda.

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ITEM #                                      RECOMMENDATION

+1. APPROVAL OF JUNE 23, 2006, MEETING MINUTES                  APPROVE

2. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS

Members of the public will have the opportunity to address the Borders Committee on any issue within the jurisdiction of the Committee. Speakers are limited to three minutes each and shall reserve time by completing a “Request to Speak” form and giving it to the Clerk prior to speaking. Committee members also may provide information and announcements under this agenda item.

CONSENT ITEMS (3 - 5)

+3. SANDAG’s BINATIONAL ANNUAL EVENT                        APPROVE
    (Paul Ganster, Committee on Binational Regional Opportunities)

Every year since 1997, the Committee on Binational Regional Opportunities (COBRO) has been tasked to support the organization of SANDAG’s annual binational event. The Borders Committee is asked to approve COBRO’s recommendation of organizing two field trips, or “mobile seminars,” in late 2006 and early 2007 for the purpose of continuing SANDAG’s strategy to pursue effective binational planning through the development of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan.

+4. STATUS REPORT ON INTERNATIONAL BORDER SEWAGE ISSUES       INFORMATION
    (Ron Saenz, SANDAG)

At its July 22, 2005, meeting, the Borders Committee requested periodic updates on border-related sewage issues. This report provides an update on these issues pursuant to the Committee’s request.

+5. REPORT ON WESTERN HEMISPHERE TRAVEL INITIATIVE            INFORMATION
    (Hector Vanegas, SANDAG)

This report will update the Borders Committee on the Western Hemisphere Travel Initiative (WHTI) that would require U.S. citizens to carry passports or authorized alternative travel documents to enter or re-enter the United States. This initiative could have significant impacts to San Diego region’s border community and land ports of entry.
+6. CALIFORNIA BIODIVERSITY COUNCIL MEETING TO DISCUSS NATURAL RESOURCES ALONG THE BORDER (Mayor Crystal Crawford, City of Del Mar)

The California Biodiversity Council (CBC) will be holding its fall meeting at the Coronado Community Center on September 28 with an all-day field trip to Tijuana on September 27. The theme of the meeting is “Biodiversity Along the Border – Working Together in a Binational Watershed.” The CBC is planning an interactive session with Mexican officials discussing the preservation of wildlife corridors and habitat linkages along an urbanizing international border and controlling sedimentation and erosion in a shared watershed. In Tijuana, the CBC will view the habitat corridor proposed for preservation and visit the Los Laureles Canyon, where there are efforts underway to control sediments and pollutants transported by storm water from Mexico to the United States.

+7. OTAY MESA-MESA DE OTAY BINATIONAL CORRIDOR STRATEGIC PLAN: DRAFT FINAL EARLY ACTION PLAN (Elisa Arias, SANDAG)

Staff will summarize comments received on the Draft Early Action Plan during the public review and comment period that ended on July 12, 2006. The Borders Committee is asked to approve the Otay Mesa-Mesa de Otay Binational Corridor: Final Early Action Plan, pending the recommendation from the COBRO at its meeting on September 5, 2006.

+8. CHARTER FOR INTERAGENCY TECHNICAL WORKING GROUP ON TRIBAL TRANSPORTATION ISSUES (Jane Clough-Riquelme, SANDAG)

The Borders Committee is asked to approve the draft charter for a new Interagency Technical Working Group on Tribal Transportation Issues. Its purpose is to serve as a forum for tribal governments in the region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region, including SANDAG, Caltrans, the County of San Diego, and the transit agencies. The working group will monitor and provide technical oversight on the implementation of the strategies and planning activities related to transportation mutually developed through the San Diego Regional Tribal Summit.
9. IMPLICATIONS OF SAFETEA-LU ON THE INDIAN RESERVATION ROADS PROGRAM (Cynthia Gómez, Branch Chief, Caltrans Native American Liaison/Bo Mazzetti, Reservation Transportation Authority) INFORMAATION

One of the priority strategies mutually identified by the tribal governments and the SANDAG Board of Directors at the 2006 San Diego Regional Tribal Summit was collaborating on the update of the Indian Reservation Roads inventory in the San Diego region. The new federal transportation bill, the Safe, Accountable, Flexible, and Efficient Transportation Act: A Legacy for Users (SAFETEA-LU 2005), passed in 2005, contains new provisions regarding the criteria for inclusion of roads in the Indian Reservations Roads (IRR) program. As part of a tribal informational series, Cynthia Gómez, Caltrans Branch Chief for Native American Liaison Program, will provide background on these new provisions and discuss the implications for updating the IRR inventory in California.

10. WATER MANAGEMENT ISSUES FROM A TRIBAL PERSPECTIVE (Mike Connolly Miskwish, Campo Band of the Kumeyaay Nation) INFORMATION

This report forms part of a series of informational items generated from the 2006 San Diego Regional Tribal Summit. During the breakout sessions on various policy areas, the issue of water management was discussed. Mike Connolly Miskwish, Councilmember of the Campo Band of the Kumeyaay Nation, will brief the Committee on water management in the San Diego region from a tribal perspective.

+11. 2007 REGIONAL TRANSPORTATION PLAN (RTP) WHITE PAPER: CROSSBORDER TRANSPORTATION (Elisa Arias, SANDAG) DISCUSSION

Several white papers are being developed for the 2007 RTP update. Staff will present the draft white paper that addresses crossborder transportation. This paper describes current crossborder travel patterns, discusses projected growth in the border region and implications for crossborder travel, and identifies issues and potential solutions for evaluation. The Borders Committee is asked to provide input and comments to this white paper in the development of the 2007 RTP.

12. UPCOMING MEETINGS

The next meeting of the Borders Committee is scheduled for Friday, October 27, 2006 at 12:30 p.m.

13. ADJOURNMENT

+ next to an agenda item indicates an attachment
The regularly scheduled meeting of the San Diego Association of Governments Borders Committee was called to order at 12:52 p.m. by Chair McCoy (South County). The attendance sheet for the meeting is attached.

Chair McCoy noted that because of the late start time, the agenda will be taken out of order to accommodate some presentations. Item 6 will be heard first, followed by Items 1, 2, 3, 5, and 4.

6. THE UCSD PARTNERSHIP WITH MEXICO (INFORMATION)

Chancellor Marye Anne Fox, University of California, San Diego (UCSD), introduced her colleagues Chris Woodruff, Director of the Center for U.S.-Mexican Studies; Graciela Platero, Director for External Affairs for the Center; Mary Walshok, Dean of UCSD Extension; and Moises Aguirre, UCSD Community Relations Representative.

Chancellor Fox began her presentation by describing the vision for UCSD’s Partnership with Mexico. The vision is to bring together leaders from education, business, government, non-profit organizations, and civil society in a series of UCSD/Mexico partnerships to address national, regional, and crossborder issues that affect the welfare of our people.

To realize this vision, the following are the four proposed Partnership Initiatives: 1) increase UCSD’s relationships and involvement in Mexico; 2) enhance quality of life through the sciences and engineering (e.g., improved air quality); 3) improve economic prospects through improved policies and structures; and 4) provide support for technology design and production in Baja California/San Diego. To support these proposals a UCSD staff member will be appointed at the UC Casa de California in Mexico City.

A basis for implementing the Partnership has been Chancellor Fox and her leadership team’s efforts to develop new relationships on behalf of the University and to strengthen existing friendships in the community. Some examples of the University’s efforts include: establishing a joint lecture series for Baja California and San Diego; and joining Mexico to address public health issues, particularly those involving sexually transmitted diseases.

Chancellor Fox mentioned that the University’s medical school is collaborating with medical schools across the border to research tuberculosis as well as sexually transmitted diseases, specifically focusing on HIV/AIDS. They’ve done so by linking their medical schools through a mobile testing lab that will allow them to analyze and diagnose these and other illnesses.
In addition to the University's existing projects, Chancellor Fox recognized that a number of its institutes will contribute to this partnership. For example, the Graduate School of International Relations and Pacific Rim Studies' (IR/PS) focus on Pacific Studies and collaborations between the United States and its nearest neighbors, as well as the Center for U.S.-Mexican Studies' focus on research and dialogue, can both contribute to strengthening the University's Partnership. Other contributing University institutions include the Schools of Medicine, Engineering, Extended Studies, the New School of Management, as well as the Scripps Institute of Oceanography and the Humanities Division.

Prominent faculty members also contribute to this Partnership. Chancellor Fox mentioned that Nobel Laureate Mario Molina has joined the UCSD Faculty and has worked very hard to establish a program to research the crossborder air basin.

Chancellor Fox concluded her presentation by thanking the Borders Committee for the opportunity to join them and extended the University's willingness to collaborate with SANDAG on these efforts.

Chair McCoy thanked Chancellor Fox and stated that the Borders Committee is most appreciative for her presence here today. The collaborative approach is by far the sanest approach to many of the issues that are common to both populations.

Chancellor Fox indicated that she is very appreciative of the Borders Committee's recognition of their collaborative efforts and the University stands ready to help in any partnerships that develop between SANDAG and the University.

Chair McCoy requested that Chancellor Fox and her colleagues keep the Borders Committee up to speed on what's going on with UCSD, and, in turn, the Borders Committee will keep UCSD informed on what they're doing.

Chancellor Fox stated that she'd be happy to do so and offered that one of her colleagues in the future could expand on some of the programs that she summarized today.

Councilmember Monroe (South County) asked where UCSD's voice is being heard regarding the immigration issue.

Chancellor Fox noted that UCSD has a strong voice regarding immigration. There is a center at UCSD that focuses on immigration studies, not only with respect to the U.S.-Mexican border, but immigration worldwide. The Center for U.S./Mexican studies also deals with this issue as an economic variable.

Professor Woodruff, Center of U.S.-Mexican Studies, added that the Center accomplishes this through public opinion pieces, conferences, and trying to establish a dialogue. The voice comes through the media, academic journals, and conversations with policy makers in Washington, D.C.

Chancellor Fox stated that she really appreciated the question because that is one of the challenges for the University. They do so much research that really could help in both policy
formation and implementation. She would be delighted to have the chance to assist the Borders Committee as they formulate questions and try to derive answers to them.

Councilmember Monroe mentioned that the Borders Committee looked at that issue a while back and heard a report from the California State Legislature’s Little Hoover Commission. They were presented with a very helpful report, but he doesn’t see any of that information being implemented. He’s looking for a stronger voice from entities like UCSD that do that type of work.

Chancellor Fox reiterated that the University would be delighted to work with the Borders Committee on figuring out a plan to allow that voice to be heard more universally.

Chair McCoy welcomed and introduced the Borders Committee’s newest member, El Cajon Councilmember Jillian Hanson-Cox, the alternate member for East County.

Councilmember Hanson-Cox commented that she looks forward to serving on the Borders Committee and thanked them for welcoming her.

1. APPROVAL OF MEETING MINUTES (APPROVE)

Action: Upon a motion made by Vice Mayor Gallo (North County Inland) and a second made by Councilmember Hanson-Cox (East County), the Borders Committee voted to approve the meeting minutes from April 28, 2006.

2. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS

Chair McCoy noted that SANDAG staff member Jane Clough-Riquelme has just released a book entitled, “Equity and Sustainable Development: Reflections from the U.S./Mexico Border.” She was the co-editor with Nora Bringas from El Colegio de la Frontera Norte. She mentioned that the book is a great collection of essays and facts for those that are interested in sustainable development and border issues. She congratulated Ms. Clough-Riquelme on her efforts.

REPORTS (Items 3-6)

3. STATUS REPORT ON THE I-15 INTERREGIONAL PARTNERSHIP – PHASE II (APPROVE)

Jane Clough-Riquelme, SANDAG’s Associate Regional Planner, provided the Borders Committee with an update on the I-15 Interregional Partnership (I-15 IRP) – Phase II. SANDAG and the Western Riverside Council of Governments (WRCOG) received a grant from Caltrans to continue with the I-15 IRP to pursue medium-term strategies in the areas of economic development, transportation, and housing identified in Phase I of the project, which was completed in 2004. Since the last update provided to the Borders Committee meeting in February, the I-15 IRP Joint Policy Committee was formed and held its first
meeting on May 26 at Temecula City Hall. At that meeting, the group of elected officials from San Diego and Riverside reviewed the Committee Charter and requested that a modification be made to the membership. The group agreed that the policy committee should consist of three members from SANDAG and four members from Riverside. The Riverside participants would be distributed in the following manner: two from WRCOG; one from the Riverside County Transportation Commission (RCTC); and one from the Riverside Transportation Authority (RTA). The list of members is included in the staff report. It may be necessary for the Borders Committee to identify an alternate so that three SANDAG representatives attend each of the next two meetings. The group selected Pia Harris-Ebert from SANDAG and Charles White from WRCOG as Co-chairs. An integrated work plan was developed for the three components of the project. Advances made in each of these areas were reported to the I-15 IRP Joint Policy Committee and are also included in the staff report.

First, in the area of economic development strategy, WRCOG and SANDAG are collaborating on the implementation of an employment cluster analysis for Riverside, which will then be compared with existing data for San Diego. A working group was created to provide feedback to the consultants working on this study. The initial cluster work has been completed. Driver industries have been identified – those that generate high value jobs, as well as those that take advantage of resources unique to Riverside. The next step will be to join the database on Riverside clusters with that of San Diego and analyze how the two economies are related. It is expected that findings from the cluster analysis would assist local economic development corporations (EDCs) and others to identify goals and strategies for economic cooperation for Riverside and San Diego Counties.

Second, on the transportation strategy, the following efforts were summarized:

- Caltrans in its draft “I-15 County Line Study” has developed a list of transportation project proposals. The four broad areas are Capacity Enhancing, Transit, Operational Improvements, and Intelligent Transportation System (ITS)/Transportation Demand Management (TDM).

- RCTC provided an update on its passenger rail planning study for I-15. The purpose of this study is to perform an objective evaluation of the potential for commuter rail extensions along the I-15 corridor from Temecula to Corona and Temecula to San Diego. RCTC will create a technical advisory committee that will include SANDAG and local governments to provide input into this process.

- In the area of transit service coordination on the I-15 corridor, SANDAG, the Metropolitan Transit System (MTS), and the North County Transit District (NCTD) have developed a draft I-15 Bus Rapid Transit Operations Plan that identified a fairly significant transit demand between Riverside and San Diego Counties. SANDAG will be working the RTA and RCTC staff to further analyze these travel forecasts and develop operational strategies to address commuter travel demand between southern Riverside County and San Diego County.

Third, regarding the housing strategy, SANDAG is undertaking a pilot project/feasibility analysis with a focus on the production of workforce (or moderate income) housing in North County along the SPRINTER rail line in collaboration with one or two major employers.
Initial meetings have been held with major employers in North County who have expressed interest in collaborating on this project.

Each of these components will be proceeding over the next few months, and initial draft reports will be presented to the I-15 RTP Joint Policy Committee in late September.

Vice Mayor Harris-Ebert (North County Inland) commented that at the meeting, there was a full agenda and it was quite interesting. She mentioned that most likely she will be chairing all the meetings. The Joint Committee was presented with very in-depth reports which highlighted each of the components. It was very beneficial for the group to review the strategies that took place in Phase I, and they discussed progress being made in the areas of housing, transportation, and economic development. She believed that this comprehensive, coordinated approach is going to bring positive results and move the region forward on resolving some of its interregional issues. Once the various studies are completed, the Committee can then determine how they have advanced on their interregional partnerships and decide where they want to continue to focus. Because she was not involved in the first Phase of the partnership, she invited observations and comments from the Borders Committee to take back to the Joint next meeting.

Action: Upon a motion made by Deputy Mayor Mackin (North County Coastal) and a second made by Councilmember Monroe (South County), the Borders Committee voted to accept the staff report for information and approve the revised I-15 Interregional Partnership Joint Committee Charter.

Mayor Pro Tem Gallo (North County Inland) stated that what happens with the I-15 IRP will go along to understanding the dynamics of the I-8 corridor and the relationship between Imperial County and San Diego County. There will be a lot of lessons learned from some of the things that weren’t done in the past for southern Riverside County and San Diego. Now the region has the same kind of scenario happening to the east. It is important that the region take these issues seriously so that they can be addressed in the I-8 Corridor.

5. OTAY MESA – MESA DE OTAY BINATIONAL CORRIDOR STRATEGIC PLAN: DRAFT EARLY ACTION PLAN (DISCUSSION)

Elisa Arias, SANDAG Senior Regional Planner, commented that Dr. Paul Ganster (Committee on Binational Regional Opportunities (COBRO)) would first make some opening remarks, and then she would provide the Committee with her presentation.

Dr. Ganster (COBRO) stated that he was pleased to present this Draft Early Action Plan that resulted from the COBRO’s workshops which were held last October in Tijuana and in San Diego. He noted that today’s presentation summarizes the results of that fairly complicated effort that SANDAG staff has worked very hard on. The COBRO discussed this draft plan at its June 12, 2006, meeting. Overall, the objective was to coordinate planning efforts effectively across the border, and he thinks that it is a very innovative activity that helps set the pattern for years to come as the region is forced to deal with more and more issues that spill across the border. Today, staff will present the report, and they will be able to answer questions once the presentation is over.
Ms. Arias indicated that she is pleased to present to the Borders Committee, the draft Early Action Plan (EAP) of the Otay-Mesa-Mesa de Otay Binational Corridor Strategic Plan. Today’s presentation summarizes the work the team has done since the binational workshops last October. She indicated that she will first go over the background, continue with the collaboration and planning processes, describe the proposed early actions, and conclude with next steps. The Regional Comprehensive Plan (RCP) for the San Diego region, which was adopted by the SANDAG Board in 2004, recognized the need for binational planning in our region. The Plan called for the creation of a partnership with Mexico to address binational border planning issues, including transportation, infrastructure, and the environment. In 2004, at SANDAG’s Binational Conference, participants discussed the state of border cooperation in the region and concluded that future efforts should focus on implementation of effective planning strategies rather than strictly collaboration. In 2005, the Borders Committee recognized the binational area of Otay Mesa as an area of opportunity to implement effective planning. At that time, findings of the Border Wait Times Study also highlighted the importance of crossborder travel and trade to the economies of the San Diego and Baja-California region.

The collaboration process for this project started with the two binational workshops that were sponsored by IMPlan and SANDAG in October 2005. Nearly 200 people attended these workshops and provided input on issues to be addressed in the strategic plan. Issues were prioritized using interactive polling technology. The Borders Committee has provided guidance in the development of the strategic plan, and COBRO has served as its primary stakeholders working group. Input was requested from several COBRO members and other stakeholders, including the cities of Chula Vista and San Diego, the County of San Diego, San Diego Dialogue, the Air Pollution Control District, the municipality of Tijuana, and housing agencies and developers in Tijuana. The technical work has been conducted by staff from IMPlan, SIDUE, Caltrans, and SANDAG.

Regarding the planning process, first the study area was identified, then the issues of transportation, economic development, housing, and environmental conservation were discussed with stakeholders. The study area includes the eastern portion of Chula Vista east of I-805 and south of Olympic Parkway, the City of San Diego’s Otay Mesa Community Planning area, the County of San Diego Otay Community Planning area, and the planning areas of Mesa de Otay, and the Alamar River in Tijuana. After defining the study area and identifying the issues to be addressed, a joint work program was developed and presented to the Borders Committee and COBRO in November 2005. A profile of the study area was prepared, including current and projected population, housing, land use, and employment. An analysis of crossborder travel surveys for trips crossing at the Otay Mesa-Mesa de Otay Port of Entry (POE) was also conducted. The Project Development Team met monthly to share research on transportation, economic development, housing, and environmental issues, which helped to determine which issues could be advanced in the first phase of the study. Staff will continue to work on the remaining issues that require further analysis or depend on ongoing planning activities of the stakeholders, such as Brown Field’s Airport Land Use Compatibility Plan and the Otay Mesa Community Plan update.

Results from the surveys conducted at the Otay Mesa-Mesa de Otay POE, in terms of why people cross the border, showed that those that live in Mexico who cross at the Otay Mesa POE into the United States. travel mainly for shopping or work purposes. Those that live in
the United States have different patterns for crossing into Mexico. Their most common purpose is visiting family/friends, followed by shopping or errands, and recreation or vacation. On average, crossborder travelers who live in the United States reported crossing about 8 times into Mexico, while travelers who live in Mexico crossed 12 times northbound. Truck traffic continues to grow at the Otay Mesa POE. Mexico is the United States’ second largest trading partner after Canada and is also California’s number one export market. The Otay Mesa POE is the busiest in the California-Mexico border and ranks third along the entire U.S.-Mexico border in terms of value of trade.

Ms. Arias explained that the proposed early actions can be implemented or initiated in the next six months and there is concurrence from stakeholders. One key early action is to establish a binational technical commission under the San Diego-Tijuana Border Liaison Mechanism (BLM) to advance planning and implementation of the future East Otay Mesa-Otay II POE and connecting roads on both sides of the border. With regard to the need for improvements to the existing Otay Mesa-Mesa de Otay POE, proposed early actions include:

- coordinating with U.S. Customs and Border Protection and Mexican Customs on a process to fund and implement identified short-term capital and operational improvements at the commercial inspection facility;
- exploring the feasibility of short-term operational and capital improvements at the passenger inspection facility;
- collaborating with the City of San Diego on the Otay Mesa Community Plan update in relation to transportation implications of future land use changes under consideration; initiating advanced planning for the Otay Mesa segment of the South Bay Bus Rapid Transit (BRT) service (SANDAG FY 2007 OWP);
- completing the Otay Mesa POE Paseo de la Amistad Pedestrian and Bicycle Circulation Study; performing property appraisal for potential South Bay BRT Transportation Center;
- and evaluating the Draft City of Tijuana Public Transportation Plan for proposed transit routes to serve the Otay Mesa-Mesa de Otay POE.

Regarding economic development, some proposed early actions are to:

- develop the 2006 San Diego Regional Economic Evaluation and Prosperity Strategy with participation from the Consulate of Mexico in San Diego, San Diego Dialogue, and the Tijuana Economic Development Corporation, among other stakeholders; collaborate with the City of San Diego in the Otay Mesa Community Plan update to evaluate future land demand for high value industrial clusters; and finally, within the framework of San Diego Dialogue’s Crossborder Innovation and Competitiveness Initiative, establish the Crossborder Innovation and Competitiveness Center, initiate a crossborder program to foster scientific and technology relationships, awareness of research, and commercialization of new technologies, and work with Baja-California to establish crossborder clinical research.

With regard to housing, some proposed early actions are to:

- 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; and promote comprehensive housing developments within the 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.

With regard to environmental issues, the proposed early actions include:

- analyzing the San Diego County Multiple Species Conservation Plan (MSCP), the Binational Vision for the Tijuana River Watershed, and the Las Californias Binational Conservation Initiative to
develop a framework for a binational approach for habitat corridor conservation and watershed management for the Tijuana River Watershed; expanding environmental analysis of the Draft Partial Program for Conservation and Urban Improvement of the Alamar River Zone to further assess habitat conditions in the Alamar River area; and supporting plans for habitat restoration and rehabilitation along the Alamar River riparian corridor. With respect to addressing conservation of sensitive habitat corridors, the proposed early actions are to: explore the feasibility of a binational land use/open space conservation study to develop an environmental assessment and mitigation strategies for SR 11, the future POE, and road connection to the Tijuana-Tecate Toll Road; in Mexico, explore possibilities for cooperative agreements between private and public sectors and community groups to build partnerships to incorporate environmental mitigation into fees and tolls; and to use existing legal mechanisms to acquire private or public land for conservation. With respect to the issue of air quality, the proposed early action is to: support the San Diego Air Pollution Control District’s crossborder clean air demonstration projects; 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, including estimation of potential motor vehicle emissions for mitigation in conservation areas.

Ms. Arias expressed her thanks to the stakeholders that have participated in this study. The next steps are to: accept comments on the study for a 30-day period ending on July 12, 2006; review the comments received and request Borders Committee approval by July 28, 2006; distribute the Final Draft Early Action Plan to the Board of Directors in August or September 2006; conduct public outreach and the Final Draft Strategic Plan by December 2006; present the Final Draft Strategic Plan to the Borders Committee by January 2007; and submit the Final Plan to the Board of Directors for approval by February 2007.

Mayor Pro Tem Gallo noted that when the Board took the tour of the Otay Mesa area, there was a road that was unfinished. He asked if this effort will continue that road. Ms. Arias indicated there will be a 2.5-mile road that will be built east of the SR 125/SR 905 interchange, referring to the future SR 11.

Councilmember Monroe mentioned that during the tour on the Mexican side of the border, the Mayor of Tijuana stated that the connecting roads cannot be built yet because the land has not been purchased. He asked if there was a timeframe established for purchasing the land.

Ms. Arias responded that the City of Tijuana’s work program has the intention of starting negotiations for land acquisition in the near future. In terms of the five-year reservation period for that land, staff understands that the land has been reserved for some kind of POE use and that the process to acquire the property from its current owners would need to begin within a five-year period.

Pedro Orso-Delgado (Caltrans) explained that during the five-year reservation period, there needs to be a Mexican federal action that corresponds with the appropriate land use that is being reserved. So, if some sort of a Mexican Customs operation is created, they would fulfill that requirement. On the other hand, Caltrans is in the process of conducting a two-tiered approach to environmental documents for this project, so that hopefully with
18 months or less, Caltrans could work with any agency in regard to dedications and preservations of the right-of-way by narrowing down the alignments that are needed.

Councilmember Hueso (City of San Diego) stated that the City of San Diego has approved the creation of a Tijuana River Watershed Management Program, which is mentioned in the study. He noted that the study area covers a portion of the Tijuana River Valley Watershed. He asked if the work plan for the watershed will encompass the entire watershed and not just the portion that is identified in the study.

Ms. Arias explained that this strategy relates to an issue that was discussed at the workshops related to conservation of sensitive habitat corridors and water quality, and one strategy that is being proposed is to analyze the San Diego County MSCP, the Binational Vision for the Tijuana River Watershed, and the Las Californias Binational Conservation Initiative with the goal of developing an overall framework for preparing and implementing a Binational Watershed Management Plan for the Tijuana River Watershed, looking also at institutional mechanisms and the resources that would be needed to prepare this kind of plan.

Councilmember Hueso asked if this study would include the Rosarito and Guadalupe Watershed.

Ms. Arias stated that it is her understanding that those are different watersheds and are not being considered at this time.

Councilmember Hueso pointed out that a binational approach to the Watershed Management Program is essential. He commended staff for coming forward with a very comprehensive and visionary plan for this area and addressing this huge issue. He would like to see a lot of emphasis being put forth in this area in the future. He also indicated that he was very impressed by the proposal of an environmental conservation fee regarding the toll road. The third border crossing at the border and the second border crossing for the Otay Mesa community is something that needs to move forward. He would like to see a second POE that would include a toll truck crossing because he felt that it would bring a lot of economic development to the region. In terms of transportation funding priorities, he also would like to ask staff to investigate a bill that was enacted in 1999 by former Senator Peace for the Border Infrastructure Financing Zone. This mechanism could be used for funding along the border and could be an enormous benefit to the community. He is interested in looking at the District and seeing how it could help the area. He commented that he would like to look at the community as an international community along the border. It will be a very exciting place to do business, live, and visit. He wants to attract the type of investments that San Diego needs and could create a Silicon Valley to the South with an international theme. This is a very exciting concept not only for San Diego, but also for Tijuana.

Ms. Arias noted that staff would be happy to look into the legislation.

Diane Eidam, SANDAG Chief Deputy Executive Director, indicated that staff could come back with an analysis of the legislation to let the Borders Committee know what their options are.
Consul General Cabrera (Baja-California/Mexico) agreed with many of the ideas that Councilmember Hueso mentioned. He stated that his office is working in that direction with SANDAG through the Border Liaison Mechanism (BLM), which is co-managed by the Consulates General of Mexico and the United States. There are different committees within the BLM, and one of them has to do with natural resources, which has a working group to focus on the Tijuana River Basin. Concerning the border crossing points between California and Baja-California, a regional meeting was recently held. At that meeting it was agreed to form a Technical Commission, which will be a working group concerning the East Otay Mesa-Otay II POE, under the umbrella of the BLM and will be chaired by the Federal Highway Administration on the U.S. side and by Mexico’s Secretariat of Communications and Transportation on the Mexican side. He commented that those agencies are aware of this issue and are working in the same direction.

Chair McCoy mentioned that this is really important because the vision is the first step. There is nothing like this area to the South or to the North. The border area is one of the most dynamic areas on the globe, for all sorts of reasons, which has created an intense interest from many groups and agencies. This report can be used as a tool for developing that area.

Supervisor Cox (County of San Diego) addressed the economic development early actions, and stated that other participants could include the South San Diego County Economic Development Council (SCEDC) and the Otay Mesa Chamber of Commerce, which are both interested in being actively involved in the discussions regarding Otay Mesa-Mesa de Otay. The County of San Diego is exploring options that can incorporate benefits from the Border Development Zone legislation, which consists of a three-mile wide band of land, from the Pacific Ocean to the State of Arizona. Within that three-mile band, a City or County could create an infrastructure financing district. This would allow those cities in that area to take a project area and take the tax increment that can be generated from that and use it as a way to leverage bonds for other improvements that would help expedite economic development for that area. It hasn’t be utilized yet because there hasn’t been the economic development opportunity to capture. He has also been made aware of some federal legislation that is looking at another boundary line, possibly from I-8 to Arizona, which would give higher consideration for Department of Commerce Economic Development Grants, focusing on projects that would generate creation of jobs. He will take a closer look at the legislation as it moves through the Legislature.

Ms. Arias responded that regarding the Regional Economic Prosperity Strategy, the Otay Mesa Chamber of Commerce, the SCEDC, and the different economic development departments from the cities also will be invited to participate in the group.

Chair McCoy again congratulated staff on an excellent report and mentioned that the July 28, 2006, meeting will need to be rescheduled so the proposed timeline will change slightly. Staff will inform the Borders Committee of the correct meeting date.

Bob Leiter, SANDAG Director of Land Use and Transportation Planning, indicated that staff will bring the document back to the Borders Committee in September for review. He commented that if the Borders Committee agrees, staff can begin to work on some of the
early actions that don’t require any amendments to the Overall Work Program and will come back with any issues that require formal action or direction.

Councilmember Hanson-Cox (El Cajon) commented that this is her first Borders Committee meeting, and she felt that the report was very informative and helped bring her up to speed on what the Borders Committee is all about.

**Action:** The Borders Committee received this item for information.

4. **REPORT ON THE SAN DIEGO – BAJA CALIFORNIA MISSION TO WASHINGTON, D.C.**

Consul General Luis Cabrera reported on the San Diego-Baja California Mission to Washington, D.C., that took place on May 21-24, 2006. This binational delegation consisted of 30 businessmen, leaders of private organizations, and government officials from both San Diego and Baja-California. The delegation was led by Governor Elorduy of Baja-California and Mayor Sanders of the City of San Diego. Gary Gallegos, Executive Director of SANDAG, also was part of this delegation. The trip was a follow-up to a binational Mission to Mexico City that took place in December 2005. The main objective of the Mission was to convey to the public and private sectors of Washington, D.C., the connections that exist between San Diego and Baja California, to promote the border region, and to identify and promote projects of common interest that can enhance the San Diego and Baja California border region. The delegation held meetings with officials from the Department of State, the International Development Bank (IDB), the U.S. General Services Administration, and the Secretary of Commerce. Among other important topics included for the binational region that were discussed included: the construction of a new Port of Entry (POE) in Otay Mesa East-Otay II; the expansion of the San Ysidro POE, including the Virginia Avenue-El Chaparral parcel that currently is closed; the construction of a binational terminal at the Tijuana International Airport; the impact of the US-VISIT Program; and the Western Hemisphere Travel Initiative in our border region.

A presentation was made to the IDB on the border relations innovation report, which was coordinated by the San Diego Dialogue. The purpose of this report is to promote trans-border cooperation, develop a cross-border innovation center, and integrate selective clusters, with the aim of enhancing innovation and competitiveness of the San Diego-Baja California region. The delegation also held meetings with members of Congress, including Senator Feinstein, Congressman Filner, and Congresswoman Davis to discuss financing options for the projects that were mentioned.

As a follow-up to the San Diego-Baja California Mission to Washington, D.C., a representative of the IDB came to San Diego on June 8, 2006, to analyze topics that were discussed in Washington, D.C. and to discuss options of financing specific projects for the Government of Baja California. Consul General Cabrera highlighted that at the June 8, 2006, meeting, the Consulate General of Mexico in San Diego and the Consulate General of the United States in Tijuana organized under the umbrella of the Border Liaison Mechanism (BLM), a regional meeting to discuss the different border crossing projects between California and Baja California. And in that meeting it was agreed to create technical commissions with the different projects. One of them will be focused on the San Ysidro expansion project to incorporate the Virginia Avenue-El Chaparral parcel, the second
will focus on Otay Mesa East-Otay II POE, and a third will focus on the Tecate POE. These technical groups will be headed by federal agencies or co-chaired by federal agencies of the two governments and coordinated by the Mexican and U.S. Consulate. It is important to point out that SANDAG is a formal part of the group and will be very important with the input that they will make in these working groups, especially in the Otay Mesa East-Otay II Technical Commission.

Chair McCoy appreciated the substantive nature of the Consul General’s report and the fact that there will be some results that will be useful for both sides of the border. She thanked the Consul General for his participation.

Action: The Borders Committee received this item for information.

ADDITIONAL COMMENTS

James Quisquis (San Pasqual Band of Mission Indians), representing the North County Inland Regional Leadership Conference (NCIRL), stated that recently there was a Federal Highway Administration (FHWA) report concerning partnerships between state Departments of Transportation and Tribes. San Diego was highlighted in a nationwide study for the work of the Reservation Transportation Authority with Caltrans and SANDAG. In that report they mentioned the North County Inland Regional Leadership Conference (NCIRL) Conference. This regional leadership organization is new; it has only been in existence for the past year and was an outgrowth of the Tribal Liaison Subcommittee of the Valley Center Community Planning Group. The meetings that have been held have been attended by many regional leaders, including County Supervisor Horn’s office, the Sheriff’s Department, school districts, tribes, the Reservation Transportation Authority (RTA), SANDAG staff, and others. He expressed his appreciation for the Borders Committee and thanked them for their leadership.

Councilmember Cook (Orange County) mentioned that there is a mistake in the minutes from the last meeting which indicated that she was not in attendance even though she did attend. She asked that that correction be made. She also inquired about the status of the joint OCTA/SANDAG meeting.

Bob Leiter, Director of Land Use and Transportation Planning, responded that a date is still being determined. The meeting should be held sometime in July or August.

7. UPCOMING MEETING

Chair McCoy indicated that the Borders Committee will be notified of the next meeting date as soon as it is determined.

8. ADJOURNMENT

Chair McCoy adjourned the meeting at 2:13 p.m.
## CONFIRMED ATTENDANCE
**BORDERS COMMITTEE MEETING**  
**JUNE 23, 2006**  
**12:30 p.m. to 2:30 p.m.**

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**ADVISORY/LIAISON MEMBERS**

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<td>Dr. Paul Ganster</td>
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San Diego Association of Governments

BORDERS COMMITTEE

September 8, 2006

AGENDA ITEM NO.: 3

Action Requested: APPROVE

SANDAG’S BINATIONAL ANNUAL EVENT

File Number 3003200

Introduction

Every year since 1997, the Committee on Binational Regional Opportunities (COBRO) has been responsible for overseeing SANDAG’s annual binational conference. Last year, the COBRO recommended changing the format from a conference that focused on a single-topic area, such as water management or energy, to two public workshops that would provide a forum to discuss binational planning issues in a specific geographic area of the border region. For 2006, the COBRO is recommending that SANDAG organize two field trips to visit specific projects and sites in the Otay Mesa-Mesa de Otay area, which is now a major focus of SANDAG’s binational planning program. The approval of the following proposal by the Borders Committee would permit the COBRO and SANDAG staff to proceed with the organization of these activities.

Recommendation

The Borders Committee is asked to approve COBRO’s recommendation of organizing two field trips, or “mobile seminars,” in late 2006 and early 2007 for the purpose continuing SANDAG’s strategy to pursue effective binational planning through the development of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan.

Discussion

In 2005, SANDAG held two binational public workshops, one in Tijuana and one in National City, focusing on planning issues in the Otay Mesa-Mesa de Otay corridor. The two workshops were attended by nearly 200 people representing governmental agencies and academia, as well as business and non-governmental organizations. Based on the input received at these workshops, staff developed a work program to prepare the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan focusing on the areas of transportation, environment, housing, and economic development. Staff from the City of Tijuana’s Municipal Planning Institute (IMPlan), Caltrans, the State of Baja California’s Secretariat of Infrastructure and Urban Development (SIDUE), and SANDAG have conducted the technical work for the preparation of the Strategic Plan through a joint Project Development Team (PDT) that has met monthly. As a result, the Otay Mesa-Mesa de Otay Binational Corridor: Draft Early Action Plan was released in June 2006.
The proposed mobile seminars will be an information-gathering exercise and an opportunity to scope out areas that may provide further insight for incorporation into the strategies of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan. One of the mobile seminars will be held in Mexico, and the other will be held in the United States, with the itineraries to be determined with input from the COBRO. Staff will provide further information regarding these seminars to the Borders Committee when they are scheduled.

BOB LEITER
Director of Land Use and Transportation Planning

Key Staff Contact: Hector Vanegas, (619) 699-1972, hva@sandag.org
STATUS REPORT ON INTERNATIONAL BORDER SEWAGE ISSUES

Introduction

Following a presentation by the International Boundary Water Commission (IBWC) in July 2005, the Borders Committee requested that SANDAG staff provide periodic updates on border sewage issues. Pursuant to this request, staff has prepared this status report.

Discussion

Since last reported to the Committee on March 24, 2006, the Bajagua Project, LLC has gained verbal support from the Director of Mexico’s National Water Commission for the construction of a wastewater treatment plant in Tijuana. However, they still need to secure formal Mexican government approvals and a suitable property.

In addition, Assemblymember Lori Saldaña introduced Assembly Bill (AB) 966, which requires the California Environmental Protection Agency (Cal/EPA), the State Water Resources Control Board (SWRCB), the San Diego Regional Water Quality Control Board, and the Colorado River Basin Water Control Board, to the extent permitted by law, to take all necessary action to establish effective water quality control programs for the California-Baja California region.

If AB 966 is approved, it would require the above agencies to work, to the extent permitted by law, with appropriate organizations on both sides of the California-Baja California border to perform the following activities: establish cooperative water quality monitoring, inspection, and technical assistance programs to protect the environment of the border region; and to work with IBWC to develop feasible mechanisms to permit discharges from Mexico into California surface waters in accordance with California water quality objectives, as specified. The bill would require those boards to expedite the development of water quality objectives and certain “total maximum daily loads” for surface waters along the border.

The bill also would require Cal/EPA and the SWRCB to: facilitate compliance by the IBWC with the act and the Federal Clean Water Act in connection with specified plant operations and discharges; assist, to the extent permitted by law, the IBWC in its efforts to oversee the design, construction, operation, and maintenance of federally funded wastewater projects in Tijuana, Mexico; expedite the issuance of any necessary waste discharge requirements in accordance with the National Pollutant Discharge Elimination System (NPDES) permit program; seek funding from appropriate agencies to carry out the bill’s requirements; and prepare and submit to the California State Legislature, on or before January 31, 2007, a description of the resources and the amount of funds necessary to comply with these requirements.
AB 966 was passed by the Senate Appropriations Committee by a vote of eight to five on August 21, 2006. The bill is now awaiting floor action by the full California Senate. If passed by the Senate, it will move to the Assembly for concurrence. If concurrence is granted, Governor Arnold Schwarzenegger would then have 30 days from that date to sign or veto the bill.

Staff will monitor this bill as it moves through the State Legislature and report to the Borders Committee on its progress. Staff also will continue to provide periodic updates to the Borders Committee on international border sewage issues.

BOB LEITER
Director of Land Use and Transportation Planning

Key Staff Contact: Ron Saenz, (619) 699-1922, rsa@sandag.org
REPORT ON WESTERN HEMISPHERE TRAVEL INITIATIVE

Introduction

The Western Hemisphere Travel Initiative (WHTI), which implements provisions of the Intelligence Reform and Terrorism Prevention Act (IRTPA) of 2004, directs the U.S. Department of Homeland Security to develop and implement a plan to require all travelers, including United States citizens, to have a passport or other similar authorized travel document to enter into the United States. In the case of land border crossings, the law requires the enforcement of this requirement by January 1, 2008, although there is a proposal to postpone the implementation of this measure until June 1, 2009. Currently, U.S. citizens who depart or enter the United States are required to have a passport; however, they are exempt when they are traveling from countries in the Western Hemisphere, except Cuba, where they only need to satisfy the Customs and Border Protection (CBP) officer of their citizenship through a driver's license or other similar identification document.

This report is presented to the Borders Committee for information at the recommendation of the Committee on Binational Regional Opportunities (COBRO).

Discussion

The region’s ports of entry (POEs) are among the busiest border crossings of the United States, and the San Ysidro-Puerta México POE is reported to be the busiest in the world. The economies on both sides of the border are increasingly becoming partners in global competitiveness and support more than $24 billion of international trade crossing the border though the Otay Mesa POE.

The region’s POEs are used daily by thousands of commuters and travelers that live on one side of the border and work, study, visit family, or do business on the other side of the border. Many of the border crossers already carry a travel document, but most U.S. citizens use their driver's license or other similar identification document to cross the border. These documents are not compatible with the electronic readers used during inspections.

In addition to the enormous number of crossers, the three POEs (San Ysidro-Puerta México, Otay Mesa-Mesa de Otay, and Tecate-Tecate) have inadequate infrastructure, which results in long wait times for border crossers and inappropriate conditions for inspections. According to SANDAG’s study of Economic Impacts of Border Wait Times at the San Diego-Baja California Border Region, the current 45-minute average border wait time represents a total of $2.4 billion in lost output and more than 32,000 jobs lost every year for the San Diego-Baja California binational region.
Stakeholders from the local border community believe that implementation of WHTI at the San Ysidro and Otay Mesa POEs will increase current border delays. To fully accomplish the IRTPA mandate and the full (100 percent) identification of border crossers without causing additional delays, capacity of the POEs needs to be improved and retrofitted with better infrastructure and technology to perform the inspections. Other issues raised by the community are that passports or the new travel documents will have a significant cost, representing an economic burden to local families residing in the border area, and that tourism and local economies would be negatively affected by longer delays at the border, which would result in additional losses to this shared binational economic sector.

Among the agencies or organizations that have raised concerns regarding the proposed implementation of WHTI are the Border Trade Alliance, the San Diego Regional Chamber of Commerce, the San Diego Alliance for Border Efficiency, San Diego State University’s Institute for Regional Studies of the Californias, San Ysidro Business Association, and the San Ysidro Chamber of Commerce. SANDAG staff will continue to communicate the concerns outlined above to the U.S. Department of Homeland Security and will keep the Borders Committee informed on this issue.

BOB LEITER
Director of Land Use and Transportation Planning

Attachment 1: Western Hemisphere Travel Initiative – The Basics

Key Staff Contact: Hector Vanegas, (619) 699-1972, hva@sandag.org
What is the Western Hemisphere Travel Initiative (WHTI)?

The Western Hemisphere Travel Initiative proposes to require all travelers to and from the United States, Canada, Mexico, the Caribbean, Central and South America and the British Overseas Territory of Bermuda to have a passport or other accepted document that establishes the bearer’s identity and citizenship to enter or re-enter the United States.

Why is it being implemented?

The Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA) mandated that the U.S. Departments of Homeland Security and State develop and implement a plan to require U.S. citizens and foreign nationals to present a passport or other appropriate identity and citizenship documentation when entering the United States.

The goal of this program is to strengthen border security and facilitate entry into the United States for U.S. citizens and legitimate international visitors.

Who will WHTI affect?

The travel initiative will affect all United States citizens entering or re-entering the United States.

It will also affect certain foreign nationals who currently are not required to present a passport to travel to the United States, namely most Canadian citizens, citizens of the British Overseas Territory of Bermuda and Mexican citizens.

When will the initiative go into effect?

This initiative will be rolled out in phases, providing as much advance notice as possible to the affected public to enable them to meet the terms of the proposed timeline.

The proposed timeline will be as follows:

• January 8, 2007 – Requirement applied to all air and sea travel from Canada, Mexico, Central and South America, the Caribbean and Bermuda to the U.S.
• January 1, 2008 – Requirement extended to all air, sea and land border crossings.

What other documents will be acceptable?

Passports are the document of choice because of security features and internationally accepted standards for international travel. However, the Department of Homeland Security is proposing the Merchant Mariner Document (MMD) and NEXUS Air Card as other acceptable travel documents to enter the U.S. when arriving by air and sea.

Is the U.S. government accepting feedback on the initiative?

Yes. While the Departments of Homeland Security and State have completed a public comment period on the Advance Notice of Proposed Rulemaking (ANPRM) in the Federal Register, the public currently has an opportunity to comment on the Notice of Proposed Rulemaking relating to the Western Hemisphere Travel Initiative for air and sea through September 25, 2006.

Comments may be submitted by one of the following methods:

• Federal e-Rulemaking Portal: www.regulations.gov. Follow the instructions for submitting comments.
• Mail: Comments by mail are to be addressed to the Bureau of Customs and Border Protection, Office of Regulations and Rulings, Border Security Regulations Branch, 1300 Pennsylvania Ave., N.W., Washington, DC 20229.

Submissions must include the agency name and docket number “USCBP 2006-0097.” Comments will be posted without change to www.regulations.gov, including any personal information sent with a comment.

The Departments of Homeland Security and State will issue a separate Notice of Proposed Rulemaking proposing rules for land travel at a later date, sufficiently in advance of the rules’ implementation date.

Where do I find out more information on WHTI?

Department of State, www.travel.state.gov

August 2006
All U.S. citizens must present a passport or other acceptable identity/citizenship document** to enter the United States when arriving by air or sea.

* Proposed Date  ** Other proposed acceptable identity/citizenship documents include the Merchant Mariner Document and NEXUS Air Card.
San Diego Association of Governments  
BORDERS COMMITTEE

September 8, 2006  

AGENDA ITEM NO.: 6

Action Requested: INFORMATION

CALIFORNIA BIODIVERSITY COUNCIL MEETING TO DISCUSS NATURAL RESOURCES ALONG THE BORDER  
File Number 3003200

Introduction

The California Biodiversity Council (CBC) will hold its fall meeting in Coronado on September 27-28, 2006. The theme of the meeting is “Biodiversity Along the Border - Working Together in a Binational Watershed.”

The CBC is a statewide council established to design strategies for preserving biological diversity and to coordinate implementation of these strategies through regional and local institutions. Mike Chrisman, Secretary, The Resources Agency, and Mike Poole, State Director, U.S. Bureau of Land Management, co-chair the CBC. Del Mar Mayor Crystal Crawford represents SANDAG on the CBC.

The CBC holds bi-annual meetings around the state to improve coordination among state and federal land management agencies and local interests.

Discussion

The two-day meeting will focus on biodiversity, habitat, wildlife corridors, and water quality along the border; trends in growth and development and the underpinnings for those trends; and conservation challenges facing the three levels of government on both sides of the border as they work together to accommodate the needs of the rapidly growing Tijuana-San Diego binational region.

Wednesday’s Field Trip

A day-long field trip is planned for Wednesday, September 27th. CBC members and guests will visit East Otay Mesa to see firsthand the biodiversity and natural resources occurring along this section of the border and to hear an overview of the development plans for Otay Mesa and the adjoining Tijuana region. Then the CBC group will travel along the Tijuana-Tecate Toll Road to Tecate where they will view the area proposed for conservation in Mexico and where it will connect with the regional preserve system in San Diego County. While traveling through the City of Tijuana to Los Laureles Canyon, the CBC will view new developments in eastern Tijuana and hear about Tijuana’s growth challenges and development plans to meet those challenges from Mexican planning officials.

At Los Laureles Canyon, officials from the City of Tijuana will dedicate a community park equipped with play equipment for the children of Los Laureles. The CBC provided support for locating and installing the play equipment. After the park dedication, the CBC will view the sites of two pervious
paver projects, one for a local road and the other for a school plaza, both funded in part from a State of California Coastal Conservancy grant. The paver blocks were designed and constructed by the residents of Los Laureles Canyon in an effort to effectively manage storm water and control erosion. Then the CBC will view the area where 40 model homes will be built utilizing sustainable design principles as developed from a project with the Iberoamerican University of Tijuana Architecture Department.

The last stop will be the Border Field State Park where the CBC will learn about the history of this international park and hear about how the site was previously used. From this location the CBC will be able to view the southern half of the Tijuana River estuary and learn about the sediment issues and restoration actions being considered. The CBC will also view the Goat Canyon Sediment Basin to discuss the challenges of managing both sediment and trash, including the many tires that wash down from neighborhoods in the Los Laureles Canyon.

**Wednesday Evening**

The CBC will return to the Coronado Community Center for dinner. The dinner speaker will be Dr. Ezequiel Ezcurra, Director of the Biodiversity Research Center of the Californias for the San Diego Natural History Museum. Dr. Ezcurra will discuss his views about conservation in Mexico and California.

**CBC Meeting**

On Thursday the CBC will welcome and introduce Mexican officials from Baja California and the City of Tijuana who were invited to participate in the discussion. The CBC will discuss challenges and opportunities for transborder cooperation along the U.S. Mexican Border, the Las Californias Binational Conservation Initiative, the Los Laureles Community Plan, and the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan, which is being coordinated by SANDAG through the Borders Committee and the Committee on Binational Regional Opportunities. The CBC will discuss a list of proposed actions designed to address the goals of erosion and sediment control, habitat conservation, sewage treatment, and trash and tire control in the border region.

**Registration**

It is not too late to register! To date there has been a high level of interest in this meeting; the two tour buses for Wednesday’s field trip are nearly full, yet there is plenty of space available at the Coronado Community Center for the meeting on Thursday. The CBC encourages and welcomes local participation and hopes to meet many of the local officials and citizens from the United States and Mexico who have been working on border issues. The registration form is attached to this report.

BOB LEITER
Director of Land Use and Transportation Planning

Attachment 1. Biodiversity Along the Border – Registration Form

Key Staff Contact: Janet Fairbanks, (619) 699-6970, jfa@sandag.org
REGISTRATION FORM

Name: ____________________________________________
Title: ____________________________________________
Organization: ______________________________________
Address: __________________________________________
City, State, Zip: _____________________________________
Phone/Fax: _________________________________________
E-mail: ____________________________________________

Wednesday, September 27, 2006
___ I have already signed up for the field trip (registration being taken separately by Lauren McNees and due Aug. 15) and I would like a lunch on the field trip: $12 select one: □ ham □ turkey □ veggie
___ I will attend the buffet dinner at Coronado Community Center at 6:00pm on September 27th: $25

Thursday, September 28, 2006
___ I will attend the Biodiversity Along the Border meeting at the Coronado Community Center from 8:00am-3:00pm on September 28th.
___ I would like a lunch at the Biodiversity Along the Border meeting: $12 (buffet; vegetarian choices available)

Total due (make check payable to “UC Regents”)
Note: Credit card payments are only being accepted online at this time; please visit http://ceres.ca.gov/biodiversity/registration.html

Please complete and submit this form by Fri., Sept. 15, 2006 to:
Sherry Cooper
UC Cooperative Extension Center for Forestry
1851 Hartnell Avenue
Redding, CA  96002-2217
Phone: (530) 224-4902  Fax: (530) 224-4904
Email: slcooper@nature.berkeley.edu

Questions?
Contact Lauren McNees,
CBC Communications Coordinator,
(916) 445-5845 or lauren.mcnees@fire.ca.gov
INTRODUCTION

The Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan is evaluating transportation, economic development, housing, and environmental conservation issues with the objective of creating an effective binational planning partnership. On June 12, 2006, the Otay Mesa-Mesa de Otay Binational Corridor: Draft Early Action Plan was presented to the Committee on Binational Regional Opportunities (COBRO) and released for a 30-day public comment and review period. The Borders Committee discussed the Draft Early Action Plan on June 23, 2006.

This report summarizes major comments received on the Draft Early Action Plan, which have been addressed, as appropriate, in the enclosed Draft Final Early Action Plan.

DISCUSSION

In addition to comments provided by the Borders Committee and COBRO members at their meetings in June 2006, written comments on the Otay Mesa-Mesa de Otay Binational Corridor: Draft Early Action Plan were received from the International Community Foundation on behalf of the Border 2012 Tijuana River Watershed Task Force, Ecology Sub Group; Urban Counsel Consultants; U.S. Fish and Wildlife Service; and Greg Waite, Integral Communities. Responses to comments have been addressed in the Draft Final Early Action Plan, as appropriate.

Major comments and responses are outlined on the following page.
It should be noted that the U.S. Fish and Wildlife Service submitted a letter of support and expressed interest in being involved in the joint effort outlined above to address the establishment of binational open space corridors and protected areas that conserve sensitive species in the border region.

Comments received from Integral Communities focus on expressing support for two of the land use alternatives the City of San Diego is considering in its Otay Mesa Community Plan update. No response is needed in the Early Action Plan.

**Next Steps**

Staff members from Tijuana’s Municipal Planning Institute (Instituto Municipal de Planeación or IMPlan), Caltrans, the Secretariat of Infrastructure and Urban Development of Baja California (Secretaría de Infraestructura y Desarrollo Urbano del Estado or SIDUE), and SANDAG continue to work on the preparation of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan. This Plan is anticipated to be finalized in early 2007.

BOB LEITER
Director of Land Use and Transportation Planning

Attachment 1: Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan: Draft Final Early Action Plan

Key Staff Contact: Elisa Arias, (619) 699-1936, ear@sandag.org
Otay Mesa – Mesa de Otay Binational Corridor

Draft Final Early Action Plan
August 2006

Transportation

Housing

Economic Development

Environment
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INTRODUCTION

FOUNDATION OF THE OTAY MESA-MESA DE OTAY BINATIONAL CORRIDOR STRATEGIC PLAN

The Regional Comprehensive Plan (RCP) for the San Diego Region, which was adopted by the San Diego Association of Governments (SANDAG) Board of Directors in 2004, 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.

Also in 2004, SANDAG held its 8th Binational Summer Conference entitled: “Cooperation across the California-Baja California Border: Where do we go from here?” Stakeholders from the United States and Mexico, including governmental agencies, the business sector, academia, and community groups examined crossborder collaboration in the Californias. The main recommendation from this conference was to create a formal interregional partnership between SANDAG and local, state, and federal agencies in Mexico to address transportation and other related issues. The partnership was proposed to be modeled after the I-15 Interregional Partnership, which is a voluntary partnership between SANDAG and the Western Riverside Council of Governments (WRCOG).

Subsequently, in 2005, SANDAG’s Borders Committee and the Committee on Binational Regional Opportunities (COBRO) identified the Otay Mesa-Mesa de Otay binational corridor as an area of opportunity to create an effective binational planning partnership. Transportation, economic development, housing, and environmental conservation are the four key issue areas that were recognized for evaluation as part of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan (Strategic Plan).

THE COLLABORATION PROCESS

The Borders Committee has provided policy guidance in the development of the Strategic Plan, while COBRO has served as the primary stakeholders group. Staff from the City of Tijuana’s Municipal Planning Institute (Instituto Municipal de Planeación or IMPlan), the California Department of Transportation (Caltrans), the Secretariat of Infrastructure and Urban Development of Baja California (Secretaría de Infraestructura y Desarrollo Urbano del Estado or SIDUE), and SANDAG have conducted the technical work for the preparation of the Strategic Plan through a joint Project Development Team (PDT). A diverse group of stakeholders from the United States and Mexico were invited to collaborate in the preparation of the Strategic Plan, as shown on Table 1.

To kick off the preparation of the Strategic Plan, two public workshops on “Crossborder Collaborative Planning for Otay Mesa-Mesa de Otay” were held in October 2005 and were co-sponsored by SANDAG and IMPlan. One of the workshops was held in the San Diego region and the other in Tijuana. Nearly 200 participants provided input on issues to be addressed in the Strategic Plan.
<table>
<thead>
<tr>
<th>Stakeholders List</th>
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<tr>
<td><strong>United States</strong></td>
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<td><strong>LOCAL</strong></td>
<td><strong>LOCAL</strong></td>
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<td>• Instituto Municipal de Planeación (IMPlan)</td>
</tr>
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<td>• City of San Diego</td>
<td>• Ciudad de Tijuana</td>
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<tr>
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<td>• Comité de Planeación y Desarrollo Municipal (COPLADEM)</td>
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<td>• County of San Diego</td>
<td>• Comisión Estatal de Servicios Públicos de Tijuana (CESPT)</td>
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<tr>
<td>• Metropolitan Transit System (MTS)</td>
<td></td>
</tr>
<tr>
<td>• San Diego County Regional Airport Authority</td>
<td></td>
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<tr>
<td>• San Diego County Water Authority</td>
<td></td>
</tr>
<tr>
<td><strong>STATE</strong></td>
<td><strong>ESTATAL</strong></td>
</tr>
<tr>
<td>• Caltrans</td>
<td>• Secretaría de Infraestructura y Desarrollo Urbano (SIDUE)</td>
</tr>
<tr>
<td>• California Environmental Protection Agency</td>
<td>• Dirección de Ecología</td>
</tr>
<tr>
<td>• California Department of Fish &amp; Game</td>
<td></td>
</tr>
<tr>
<td>• California Highway Patrol</td>
<td></td>
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<tr>
<td><strong>FEDERAL</strong></td>
<td><strong>FEDERAL</strong></td>
</tr>
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<td>• U.S. Customs and Border Protection</td>
<td>• Consulado General de México</td>
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<tr>
<td>• U.S. General Services Administration</td>
<td>• Instituto de Administración y Avalúos de Bienes Nacionales (INDAABIN)</td>
</tr>
<tr>
<td>• International Boundary and Water Commission</td>
<td>• Comisión Internacional de Límites y Aguas (CILA)</td>
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<tr>
<td>• Bureau of Land Management</td>
<td>• Secretaría de Comunicaciones y Transporte (SCT)</td>
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<tr>
<td>• Federal Highway Administration</td>
<td>• Aeropuerto Internacional de Tijuana</td>
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<tr>
<td>• Federal Transit Administration</td>
<td>• Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)</td>
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<td><strong>NON-GOVERNMENTAL ORGANIZATIONS (NGOs)-COMMUNITY</strong></td>
<td><strong>ORGANIZACIONES NO GUBERNAMENTALES (ONGs) -COMUNIDAD</strong></td>
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<td>• Chambers of Commerce-Economic Development Corporations</td>
<td>• Cámaras de Comercio</td>
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<tr>
<td>• Academia</td>
<td>• Academia</td>
</tr>
<tr>
<td>• Las Californias Binational Conservation Initiative</td>
<td>• Pronatura</td>
</tr>
<tr>
<td>• Others</td>
<td>• Otros</td>
</tr>
</tbody>
</table>
THE STRATEGIC PLANNING PROCESS AND EARLY ACTIONS

The planning process to develop the Strategic Plan includes several elements. First, a study area was defined in collaboration with binational stakeholders. At the binational workshops held in October 2005, issues related to transportation, economic development, housing, and environmental conservation were identified and ranked through an interactive polling exercise. Following the workshops, staff developed a work program that includes a series of tasks to address the issues that were identified.

In December 2005, the PDT set out to research the various issues brought up by the stakeholders. This initial exploration provided staff with a better understanding of the issues that could be advanced in the first phase of the study or early action plan.

For example, in the transportation arena, Caltrans’ progress on the environmental phase of the proposed State Route (SR) 11 and coordination with federal agencies for the East Otay Mesa border crossing provided a catalyst for identifying early actions on both sides of the border toward the implementation of a new land port of entry (POE) in East Otay Mesa. On the other hand, there are other planning activities underway, such as the San Diego County Regional Airport Authority’s Brown Field Master Plan Update, which may affect the Strategic Plan’s recommendations and actions, but where outcomes are not known yet. Thus, actions for issues where more research still needs to be conducted or that depend on other ongoing planning efforts will be identified in the final Strategic Plan, which is anticipated to be completed in early 2007.

This Early Action Plan is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15262 (Feasibility and Planning Studies) which states that “a project involving only feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an Environmental Impact Report or Negative Declaration, but does require consideration of environmental factors.”

ORGANIZATION OF THE REPORT

The “Issues for Evaluation and Work Program” chapter outlines transportation, economic development, housing, and environmental issues identified within the study area and includes the Strategic Plan’s work program. The “Population, Housing, Land Use, and Employment” chapter presents a profile of the study area, which describes current and projected population, employment, housing, and land uses. The “Interregional Travel” chapter describes interregional crossborder travel patterns via the Otay Mesa POE. The remaining chapters present background information for each of the four issue areas, as well as a policy analysis that leads to the early action initiatives.
ISSUES FOR EVALUATION AND WORK PROGRAM

INTRODUCTION
This chapter describes the issues identified for evaluation in the categories of transportation, economic development, housing, and environmental conservation within the study area. It also provides an overview of the results of the polling conducted at the two binational workshops held in October 2005, where interactive technology was used to elicit participants' opinions on the importance of these issues. The remainder of this chapter outlines the work program to develop the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan (Strategic Plan). COBRO and the Borders Committee concurred with the tasks included in the work program in fall 2005.

THE BINATIONAL STUDY AREA
Figure 1 illustrates the study area, which was identified in collaboration with local and binational stakeholders. It encompasses the City of San Diego’s Otay Mesa Community Planning Area, the County of San Diego’s Otay Community Planning Area (including Otay Lakes), the eastern portion of the City of Chula Vista east of Interstate 805 and south of Olympic Parkway, and the planning areas of Mesa de Otay and Centenario (including the Alamar River) in the City of Tijuana. Figure 2 shows the study area and vicinity on both sides of the border.

ISSUES IDENTIFIED
SANDAG and IMPlan co-sponsored two binational workshops, which were held on October 3, 2005, in National City, and on October 11, 2005, in Tijuana. Approximately 100 people participated at the workshop held in National City, and more than 80 people attended the workshop held in Tijuana.

These workshops drew stakeholders from both sides of the border, which provided a wide range of opinions. Participants included government officials, academics, and representatives from business and non-governmental organizations. The following issues were discussed at the binational workshops.
### Issues Identified

<table>
<thead>
<tr>
<th>Area</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTATION</td>
<td>- Future East Otay Mesa-Otay II Port of Entry and connecting roads</td>
</tr>
<tr>
<td></td>
<td>- Improvements to existing Otay Mesa Port of Entry and connecting roads</td>
</tr>
<tr>
<td></td>
<td>- Improvements to crossborder and regional public transportation services</td>
</tr>
<tr>
<td>TRANSPORTATION</td>
<td>- Toll revenues for new ports of entry and access roads</td>
</tr>
<tr>
<td>FUNDING ALTERNATIVES*</td>
<td>- Additional local gas tax</td>
</tr>
<tr>
<td></td>
<td>- Additional residential development impact fees for transportation</td>
</tr>
<tr>
<td></td>
<td>- Non-residential development impact fees for transportation</td>
</tr>
<tr>
<td>ECONOMIC DEVELOPMENT</td>
<td>- Promote creation or expansion of common economic clusters on both sides of the border</td>
</tr>
<tr>
<td></td>
<td>- Address future industrial land supply and demand</td>
</tr>
<tr>
<td></td>
<td>- Address relationship between the area’s airports operations and existing and future industrial land use</td>
</tr>
<tr>
<td></td>
<td>- Address infrastructure needs of existing and future industrial land uses (water, energy, etc.)</td>
</tr>
<tr>
<td>HOUSING</td>
<td>- Address future housing supply and demand</td>
</tr>
<tr>
<td></td>
<td>- Address housing affordability issues and opportunities</td>
</tr>
<tr>
<td></td>
<td>- Address relationship between Brown Field Municipal Airport and Tijuana’s International Airport operations and existing and future residential land use</td>
</tr>
<tr>
<td></td>
<td>- Address infrastructure needs of existing and future residential land use (water, sewage, schools, etc.)</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>- Address conservation of sensitive habitat corridors</td>
</tr>
<tr>
<td></td>
<td>- Address conservation of urban river corridors (e.g., Alamar River and Otay River Watershed)</td>
</tr>
<tr>
<td></td>
<td>- Address air quality</td>
</tr>
</tbody>
</table>

*The transportation financing issues were discussed at the workshop held in the San Diego region only.

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**Figure 1**
Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan Study Area

[Image of the study area map]
INTERACTIVE POLLING

Process

Interactive polling technology was used to help the workshop participants prioritize critical issues that are important to address in the Strategic Plan. Each participant was provided with a remote FM radio input terminal to respond to questions generated by computer and projected onto a large screen. The technology provided the ability to quickly prioritize the issues. The results were tabulated and immediately presented back to the group for discussion. Demographic information was collected to assess the different perspectives of the participants based on where they lived and what organization they represented.

The participants prioritized the importance of the issues outlined in the previous section. A forced-pair prioritization technique was used where two of the critical issues were presented to the group, and each participant selected which was most important. After evaluating every possible pair, the relative importance of the issues was calculated on a scale from 0 to 100 and immediately presented to the group for discussion.
It is important to note that the interactive polling process was designed to stimulate discussion and understanding of the perspectives of the various participants. It was not designed to be statistically representative of a broader group of participants. The number of participants may vary among polls since all participants may not have participated in every poll.

**Results**

Summary results of the interactive surveys are presented in this section. Appendix A includes detailed interactive polling results.

The polling results from both workshops, with a few exceptions, revealed an overall consistent response from both American and Mexican participants. This was especially evident in the area of transportation. Participants from the United States and Mexico gave high priority to both making improvements to the existing Otay Mesa POE and pursuing a new POE at East Otay Mesa. Also, both sides were in agreement when asked if they would support seeking toll revenues for new POEs and access roads.

With regard to economic development issues, addressing infrastructure needs of existing and future industrial land use and promoting the creation or expansion of common employment clusters were identified as top priorities.

Related to housing, addressing residential infrastructure needs ranked highest. There was some variation with regard to housing affordability. This issue ranked second in the National City workshop and third in Tijuana.

Conservation of urban river corridors came out on top under issues relating to the environment. Habitat conservation, air quality, and water quality issues also were discussed.

**STRATEGIC PLAN WORK PROGRAM**

Feedback gathered at the binational workshops was considered in the preparation of a list of tasks for the development of the Strategic Plan, which are outlined below.

**TRANSPORTATION**

1. **Improvements to existing Otay Mesa POE and connecting roads**
   a. Analyze crossborder travel characteristics at the Otay Mesa and San Ysidro POEs from recent surveys
   b. Collaborate with U.S. Customs and Border Protection and Mexican Customs to evaluate short-term and long-term improvements to the Otay Mesa POE (operations and facilities)
   c. Implement pedestrian access improvements and customer amenities for Metropolitan Transit System (MTS) Route 905 stop at the Otay Mesa POE
   d. Evaluate current transit serving the Mesa de Otay POE
2. Future East Otay Mesa - Otay II POE and connecting roads
   a. Hold coordination meetings with staff involved in East Otay Mesa-Otay II POE planning and implementation
   b. Prepare a joint work program and master calendar to align implementation activities for the new POE, including connecting roads and land acquisition on both sides of the border
   c. Conduct a financial feasibility study for the new POE and connecting roads in the United States and Mexico, including tolls (pending funding)

3. Improvements to crossborder and regional public transportation services
   a. Explore multimodal transit center in the vicinity of the Otay Mesa POE
   b. Monitor findings of MTS' Comprehensive Operations Analysis for Route 905
   c. Monitor development of new regional transit services in Tijuana (Ruta Troncal)
   d. Evaluate timing of the proposed South Bay Bus Rapid Transit Phase II service between eastern Chula Vista and the Otay Mesa POE

▶ ECONOMIC DEVELOPMENT

1. Address infrastructure needs of existing and future industrial land uses (e.g., water, energy)
   a. Evaluate elements of the Integrated Regional Infrastructure Strategy (IRIS) and Mesa de Otay Specific Plan

2. Promote creation or expansion of common employment clusters on both sides of the border, and

3. Address future industrial land use supply and demand
   a. Participate in the update of the 1998 San Diego Regional Economic Prosperity Strategy (REPS) and the 2001 Employment Lands Inventory and Market Analysis
   b. Evaluate the city of Tijuana’s Municipal Development Plan (2005-2007)
   c. Participate in updates of the City of San Diego’s Otay Mesa Community Plan, City of Chula Vista’s General Plan, County of San Diego’s East Otay Mesa Specific Plan, and Mesa de Otay Specific Plan

4. Address relationship between the area’s airports operations and existing and future industrial land use
   a. Monitor the San Diego County Regional Airport Authority’s update of the Airport Land Use Compatibility Plan
Housing

1. Address infrastructure needs of existing and future residential land use (e.g., water supply, sewage, schools)
   a. Evaluate elements of the IRIS and Mesa de Otay Specific Plan

2. Address housing affordability issues and opportunities, and

3. Address future housing supply and demand
   a. Analyze crossborder work trip characteristics at the Otay Mesa and San Ysidro POEs from recent surveys
   b. Gather information on housing plans and housing production in Tijuana (public and private sector)
   c. Provide results for SANDAG’s interregional commute model of the 2030 San Diego Regional Growth Forecast update
   d. Participate in updates of the City of San Diego’s Otay Mesa Community Plan, City of Chula Vista’s General Plan, County of San Diego’s East Otay Mesa Specific Plan, and Mesa de Otay Specific Plan

4. Address relationship between Brown Field Municipal Airport and Tijuana’s International Airport operations and existing and future residential land use
   a. Monitor San Diego County Regional Airport Authority’s update of the Airport Land Use Compatibility Plan

Environment

1. Address conservation of urban river corridors (e.g., Alamar River and Otay River Watershed),

2. Surface water quality, and

3. Address conservation of sensitive habitat corridors
   a. Research Mesa de Otay conservation planning activities by local, state, and federal agencies
   b. Analyze Multiple Species Conservation Program, Las Californias Binational Conservation Initiative, and other conservation studies
   c. Monitor implementation of Tijuana Master Plan for water and wastewater infrastructure

4. Air Quality
   a. Collaborate with the U.S. Environmental Protection Agency in the Border 2012 program, the Binational Air Quality Task Force, and the San Diego Air Pollution Control District in binational clean air effort
POPULATION, HOUSING, LAND USE, AND EMPLOYMENT

This chapter presents a profile of the communities within the binational study area\(^1\) and includes current, as well as projected population, housing, land use, and employment data.

POPULATION

This section presents data on current and projected population within the study area. The tables below show the number of inhabitants in each subarea.

Current Population

In 2004, approximately 174,184 people resided in the Otay Mesa-Mesa de Otay binational study area. Since the year 2000, most of the growth has occurred in the areas of Otay Ranch (south of Olympic Parkway)\(^2\), Otay Mesa, and Mesa de Otay. Table 2 shows current population by subarea.

<table>
<thead>
<tr>
<th>Subarea</th>
<th>2004 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chula Vista – Otay Ranch South of Olympic Parkway</td>
<td>5,638</td>
</tr>
<tr>
<td>City of San Diego – Otay Mesa</td>
<td>12,273</td>
</tr>
<tr>
<td>County of San Diego – East Otay Mesa*</td>
<td>2</td>
</tr>
<tr>
<td>City of Tijuana – Alamar River</td>
<td>57,245</td>
</tr>
<tr>
<td>City of Tijuana – Mesa de Otay</td>
<td>99,026</td>
</tr>
<tr>
<td><strong>Total Population</strong></td>
<td><strong>174,184</strong></td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* Population figure does not include the 7,380 group quarters population

---

1. Current data for the San Diego Region is based on SANDAG’s Series 11 and approved land use plans. Forecast data reflects SANDAG’s Final Regional Growth Forecast (December 2003).

2. This area also includes neighborhoods west of the County landfill up to the I-805, industrial areas along east Main Street, and neighborhoods bordering Otay Mesa.
Projected 2030 Population

In 2030, the forecasted study area population will be approximately 362,799 people. This represents an increase of 245,860 people and a 210 percent increase from 2004.

Table 3
Forecasted Population of Study Area (2030)

<table>
<thead>
<tr>
<th>Subarea</th>
<th>2030 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chula Vista – Otay Ranch South of Olympic Parkway</td>
<td>49,871</td>
</tr>
<tr>
<td>City of San Diego – Otay Mesa</td>
<td>49,282</td>
</tr>
<tr>
<td>County of San Diego – East Otay Mesa*</td>
<td>20,142</td>
</tr>
<tr>
<td>City of Tijuana – Mesa de Otay**</td>
<td>243,504</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>362,799</strong></td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* This does not include the 10,442 group quarters population
** 2025 population projections were used to forecast 2030 population using IMPlan’s forecasted growth rate

Note: Alamar River data is being collected and will be available in fall 2006

It is forecasted that by 2030 Mesa de Otay’s population will increase by approximately 144,478 residents, bringing the total population to 243,504 (Table 3). This represents a 246 percent increase in population and the largest numerical increase of all the subareas.

It should be noted that the City of San Diego is currently updating its Otay Mesa Community Plan and is considering changes that would increase the future population of this area. In addition, there are proposed plans for a new satellite city called Valle de las Palmas within the city of Tijuana’s boundaries but outside the study area (see Figure 2 on page 7). Build out is expected to be in 2040. The project would build approximately 280,000 housing units that would support a population of more than 1.1 million residents.

HOUSING

The following is an analysis of the number of housing units and residential density within the study area. The following tables quantify this information by subarea and the overall study area.

---

3 Alamar River population count is not available and will be included in future reports.
Current Housing Units

According to 2004 data, the total number of housing units in the study area, not including the Alamar River subarea, is approximately 29,048. Mesa de Otay has the largest share of existing housing units, with approximately 24,153 housing units or 83 percent of the total. This number combined with its size also accounts for why it is one of the most densely populated subareas. Table 4 shows 2004 housing units by subarea.

Table 4
Estimated Number of Housing Units (2004)

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>Mesa de Otay</th>
<th>Total Housing Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>1,758</td>
<td>2,482</td>
<td>N/A</td>
<td>4,240</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>79</td>
<td>573</td>
<td>N/A</td>
<td>652</td>
</tr>
<tr>
<td>Total Housing Units</td>
<td>1,837</td>
<td>3,055</td>
<td>24,153</td>
<td>29,045</td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* South of Olympic Parkway

Note: Alamar River data is being collected and will be available in fall 2006

In the year 2004, the subareas that shared relatively similar densities were both Otay Ranch, with a residential density of 8.74 households per acre, and Otay Mesa, with 8.67 households per acre (Table 5). At the high end of the spectrum, Mesa de Otay contains an average residential density of 12.78 households per acre.

Table 5

<table>
<thead>
<tr>
<th>Subarea</th>
<th>2004 Housing Units per Developed Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chula Vista – Otay Ranch South of Olympic Parkway</td>
<td>8.74</td>
</tr>
<tr>
<td>City of San Diego – Otay Mesa</td>
<td>8.67</td>
</tr>
<tr>
<td>City of Tijuana – Mesa de Otay</td>
<td>12.78</td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

Note: Alamar River data is being collected and will be available in fall 2006

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4 Total housing units per developed residential acre.
**Forecasted Housing Units**

By the year 2030, the number of housing units for the entire study area is expected to more than triple to 93,617 (Table 6). Mesa de Otay is still forecasted to hold the largest share of housing units at approximately 62,936 units or about two-thirds of the total units.

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>East Otay Mesa</th>
<th>Mesa de Otay</th>
<th>Total Housing Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>6,403</td>
<td>5,289</td>
<td>3,590</td>
<td>N/A</td>
<td>15,282</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>7,766</td>
<td>7,633</td>
<td>0</td>
<td>N/A</td>
<td>15,399</td>
</tr>
<tr>
<td>Total Housing</td>
<td>14,169</td>
<td>12,922</td>
<td>3,590</td>
<td>62,936</td>
<td>93,617</td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* South of Olympic Parkway

Note: Alamar River data is being collected and will be available in fall 2006

In 2030, forecasts show that Otay Ranch’s residential density\(^5\) will decrease to seven households per acre (Table 7), while Mesa de Otay’s will more than double from 12.78 to 29.39 households per acre. It is interesting to note that Mesa de Otay will continue to maintain the highest household density. On the low end of the residential density spectrum is East Otay Mesa, where the estimated residential density is forecast at 1.4 households per acre.

<table>
<thead>
<tr>
<th>Subarea</th>
<th>2030 Housing Units per Developed Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chula Vista – Otay Ranch South of Olympic Parkway</td>
<td>7.00</td>
</tr>
<tr>
<td>City of San Diego – Otay Mesa</td>
<td>13.60</td>
</tr>
<tr>
<td>County of San Diego – East Otay Mesa</td>
<td>1.40</td>
</tr>
<tr>
<td>City of Tijuana – Mesa de Otay*</td>
<td>29.39</td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* Residential density is for 2025

Note: Alamar River data is being collected and will be available in fall 2006

---

\(^5\) Total housing units per developed residential acre.
LAND USE

The following is an analysis of the current and planned land uses in the study area. Land use tables below show the number of developed and developable acres for each land use.

Current Land Use

Table 8 shows the developed acres by land use category in 2004, while Table 9 displays vacant developable acres. As of 2004, there were a total of 4,808 developed residential acres. Mesa de Otay contained 1,934 of those acres, which represents the largest developed area for residential land use in the study area. For the entire study area, there were 5,287 developable acres set aside for residential land use. Nearly half of these acres are located in East Otay Mesa and are classified as spaced rural residential, which allows up to one dwelling unit per acre. Otay Ranch contains the largest portion of land that is dedicated to single- and multiple-family residential land uses.

For the category of commercial/office land uses, there were a total of 2,725 developed acres and 843 developable acres. Tijuana International Airport contains the most developed acres, and East Otay Mesa contains the largest inventory of developable acres.

Also in 2004, there were an estimated 3,338 acres of developed industrial land in the study area. Out of all the subareas, Otay Mesa’s 1,807 acres represent the largest number of developed industrial acres. The study area contains a total of 3,100 developable acres, which are designated for heavy/light industrial land uses. Out of this number, Otay Mesa contains 1,565 acres, which represents the largest acreage available among the subareas for these types of land uses. The County of San Diego’s Otay Community Planning Area has 28,577 acres set aside, which is the most land dedicated for the land use category of constrained acres and includes areas containing rare and endangered plant and animal species and all private land holdings.

Table 8
Existing Land Use Distribution (2004)

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>East Otay Mesa</th>
<th>Mesa de Otay**</th>
<th>Alamar River</th>
<th>Tijuana Int’l Airport**</th>
<th>Total Developed Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaced Rural Residential</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>60</td>
<td>N/A</td>
<td>1,706</td>
<td>1,783</td>
</tr>
<tr>
<td>Single Family</td>
<td>170</td>
<td>306</td>
<td>0</td>
<td>1,874</td>
<td>589</td>
<td>0</td>
<td>2,939</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>40</td>
<td>46</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Commercial/Office</td>
<td>292</td>
<td>122</td>
<td>0</td>
<td>841</td>
<td>30</td>
<td>1,470</td>
<td>2,725.3</td>
</tr>
<tr>
<td>Heavy/Light Industry</td>
<td>93</td>
<td>1,807</td>
<td>170</td>
<td>1,063</td>
<td>4</td>
<td>201</td>
<td>3,338</td>
</tr>
<tr>
<td>Agriculture/Extractive</td>
<td>131</td>
<td>535</td>
<td>1,743</td>
<td>1</td>
<td>183</td>
<td>0</td>
<td>2,593</td>
</tr>
<tr>
<td>Mixed Use &amp; Special Plan Area</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,084</td>
<td>0</td>
<td>1,084</td>
</tr>
<tr>
<td>Schools</td>
<td>63</td>
<td>84</td>
<td>0</td>
<td>N/A</td>
<td>28</td>
<td>N/A</td>
<td>175</td>
</tr>
<tr>
<td>Constrained Acres***</td>
<td>7,798</td>
<td>5,647</td>
<td>28,577</td>
<td>1,377</td>
<td>1,140</td>
<td>39</td>
<td>44,578</td>
</tr>
<tr>
<td><strong>Total Acres</strong></td>
<td>8,587</td>
<td>8,547</td>
<td>30,507</td>
<td>5,216</td>
<td>3028.3</td>
<td>3,416</td>
<td>59,301.3</td>
</tr>
</tbody>
</table>

Source: SANDAG, 2004 base year data from Series 11 Forecast (2006), and IMPlan

* South of Olympic Parkway
** Boundary of Mesa de Otay and Tijuana International Airport subareas were overlayed on IMPlan’s land use GIS database to obtain these data
*** Open space and recreation – IMPlan combines recreation space with school acreage
Table 9
Vacant Developable Acres (2004)

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>East Otay Mesa</th>
<th>Mesa de Otay**</th>
<th>Tijuana Int’l Airport**</th>
<th>Total Vacant Developable Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaced Rural Residential</td>
<td>0</td>
<td>0</td>
<td>2,325</td>
<td>0</td>
<td>0</td>
<td>2,325</td>
</tr>
<tr>
<td>Single Family</td>
<td>1,072</td>
<td>0</td>
<td>239</td>
<td>207</td>
<td>0</td>
<td>1,518</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>661</td>
<td>676</td>
<td>104</td>
<td>3</td>
<td>0</td>
<td>1,444</td>
</tr>
<tr>
<td>Commercial/Office</td>
<td>252</td>
<td>240</td>
<td>255</td>
<td>87</td>
<td>9</td>
<td>843</td>
</tr>
<tr>
<td>Heavy/Light Industry</td>
<td>655</td>
<td>1,565</td>
<td>706</td>
<td>111</td>
<td>20</td>
<td>3,100</td>
</tr>
<tr>
<td>Agriculture/Extractive</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mixed Use &amp; Special Plan Area</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>209</td>
<td>0</td>
<td>209</td>
</tr>
<tr>
<td>Schools</td>
<td>695</td>
<td>128</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>823</td>
</tr>
<tr>
<td><strong>Total Acres</strong></td>
<td><strong>3,335</strong></td>
<td><strong>2,609</strong></td>
<td><strong>3,629</strong></td>
<td><strong>617</strong></td>
<td><strong>29</strong></td>
<td><strong>10,219</strong></td>
</tr>
</tbody>
</table>

Source: SANDAG, 2004 base year data from Series 11 Forecast (2006), and IMPlan

* South of Olympic Parkway
** Boundary of Mesa de Otay and Tijuana International Airport subareas were overlayed on IMPlan’s land use GIS database to obtain these data

Note: Alamar River data is being collected and will be available in fall 2006

Planned Land Use

Table 10 presents the 2030 forecasted land use distribution, which is illustrated in Figure 3, while Table 11 shows vacant developable acres. This information is presented for the San Diego County portion of the study area only. No forecast data are available for the Tijuana subareas.

By the year 2030, nearly 30 percent of the 7,143 developed residential acres will be in the Mesa de Otay subarea. Another 26 percent of the residential acres are forecasted to be developed in East Otay Mesa. It is estimated there will be virtually no developable residential acres left in the study area at that time.

For the category of commercial/office land uses, it is estimated there will be approximately 1,754 developed acres and 383 developable acres.

It is forecasted that there will be approximately 4,772 acres of developed industrial land in the study area. Also, 1,309 acres are forecasted to be developable. The majority of the remaining developable industrial land will be in Otay Mesa.

Also at this time, the study area will have a total of 30,401 constrained acres. East Otay Mesa’s planning area will have 23,121 constrained acres. Based on the forecast, East Otay Mesa will maintain its place as the subarea with the most acreage set aside for these land uses.
Figure 3
Planned Land Use and Transportation Network
### Table 10
Forecasted Land Use Distribution (2030)

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>East Otay Mesa</th>
<th>Mesa de Otay</th>
<th>Tijuana Int’l Airport</th>
<th>Total Developed Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaced Rural Residential</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>Single Family</td>
<td>1,509</td>
<td>618</td>
<td>1,862</td>
<td>2,081</td>
<td>0</td>
<td>6,070</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>567</td>
<td>335</td>
<td>104</td>
<td>3</td>
<td>0</td>
<td>1,009</td>
</tr>
<tr>
<td>Commercial/Office</td>
<td>440</td>
<td>201</td>
<td>185</td>
<td>928</td>
<td>0</td>
<td>1,754</td>
</tr>
<tr>
<td>Heavy/Light Industry</td>
<td>259</td>
<td>2,296</td>
<td>822</td>
<td>1,174</td>
<td>221</td>
<td>4,772</td>
</tr>
<tr>
<td>Agriculture/Extractive</td>
<td>278</td>
<td>517</td>
<td>1,411</td>
<td>0</td>
<td>0</td>
<td>2,206</td>
</tr>
<tr>
<td>Mixed Use &amp; Special Plan area</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>209</td>
<td>0</td>
<td>209</td>
</tr>
<tr>
<td>Schools</td>
<td>393</td>
<td>114</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>507</td>
</tr>
<tr>
<td>Constrained Acres**</td>
<td>4,129</td>
<td>2,864</td>
<td>23,121</td>
<td>248</td>
<td>39</td>
<td>30,401</td>
</tr>
<tr>
<td>Total</td>
<td>7,579</td>
<td>6,945</td>
<td>27,505</td>
<td>4,703</td>
<td>260</td>
<td>43,992</td>
</tr>
</tbody>
</table>

Source: SANDAG, Final 2030 Regional Growth Forecast (2003), and IMPlan

* South of Olympic Parkway
** Open space and recreation

Note: Alamar River data is being collected and will be available in fall 2006

### Table 11
Forecasted Vacant Developable Acres (2030)

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Otay Ranch*</th>
<th>Otay Mesa</th>
<th>East Otay Mesa</th>
<th>Mesa de Otay</th>
<th>Total Developable Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaced Rural Residential</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Single Family</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Multiple Family</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Commercial/Office</td>
<td>239</td>
<td>110</td>
<td>34</td>
<td>0</td>
<td>383</td>
</tr>
<tr>
<td>Heavy/Light Industry</td>
<td>379</td>
<td>698</td>
<td>232</td>
<td>0</td>
<td>1,309</td>
</tr>
<tr>
<td>Agriculture/Extractive</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mixed Use &amp; Special Plan area</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Schools</td>
<td>323</td>
<td>28</td>
<td>0</td>
<td>N/A</td>
<td>351</td>
</tr>
<tr>
<td>Total</td>
<td>941</td>
<td>836</td>
<td>268</td>
<td>0</td>
<td>2,045</td>
</tr>
</tbody>
</table>

Source: SANDAG, Final 2030 Regional Growth Forecast (2003), and IMPlan

* South of Olympic Parkway

Note: Alamar River data is being collected and will be available in fall 2006
Otay Mesa Community Plan Land Use Scenarios

The City of San Diego is in the process of updating the Otay Mesa Community Plan. There are four alternatives being evaluated, and three of them include plans for a significant increase in housing. The adopted plan represents the No Project Alternative, which includes 12,400 housing units and 2,900 industrial zoned acres for development.\(^6\)

Draft Scenario 1 would allow the construction of 29,400 housing units. This represents more than a doubling of housing units from the No Project Alternative. Under this scenario, 2,070 industrial zoned acres would be available for development, or a 29 percent decrease in industrial zoned land. Based on this scenario, the U.S. side of the study area would have a forecasted housing unit increase of 17,000 units or 55 percent. This scenario would decrease the U.S. portion of the study area’s industrial zone land by 830 acres.

Draft Scenario 2 has the greatest share of proposed future housing units and resulting reduction of industrial zoned land. The 31,800 housing units proposed would be a 156 percent increase from the No Project Alternative, and the 1,990 industrial zoned acres would represent a 31 percent decrease of this type of land. For this scenario, the U.S. side of the study area would have a forecasted housing unit increase of 19,400 units or 63 percent. This scenario would decrease the U.S. portion of the study area’s industrial zone land by 910 acres.

Draft Scenario 3 appears to be the closest related, in terms of proposed housing units and industrial zoned acres, to the No Project Alternative. This scenario proposes 18,800 housing units, which is a 52 percent increase from the No Project Alternative. This scenario would leave 2,370 industrial zoned acres for development, which is a 18 percent decrease compared to the No Project Alternative. The U.S. side of the study area, under this scenario, would have a forecasted housing unit increase of 6,400 units or 21 percent. This scenario would reduce the U.S. portion of study area’s industrial zoned land by 530 acres. Table 12 shows the residential and industrial land uses proposed for each draft land use scenario under evaluation.

Table 12

<table>
<thead>
<tr>
<th></th>
<th>Proposed Single-Family Detached Units</th>
<th>Proposed Attached and Multi-Family Units</th>
<th>Proposed Total Housing Units</th>
<th>Proposed Industrial Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Project</td>
<td>4,800</td>
<td>7,600</td>
<td>12,400</td>
<td>2,900</td>
</tr>
<tr>
<td>Draft Scenario 1</td>
<td>5,000</td>
<td>24,400</td>
<td>29,400</td>
<td>2,070</td>
</tr>
<tr>
<td>Draft Scenario 2</td>
<td>5,000</td>
<td>26,800</td>
<td>31,800</td>
<td>1,990</td>
</tr>
<tr>
<td>Draft Scenario 3</td>
<td>4,600</td>
<td>14,200</td>
<td>18,800</td>
<td>2,370</td>
</tr>
</tbody>
</table>

\(^6\) City of San Diego, Otay Mesa Community Plan Update: Information Packet, July 2006.
EMPLOYMENT

The following is an analysis of the current and projected employment in the study area. The following tables show the number of employees and employee density in each subarea.

Current Employment

Table 13 shows the total number of people employed in 2004. As of 2004, there were approximately 79,699 people employed in the study area.

Most of this employment is in the Mesa de Otay subarea, with approximately 65,000 people employed or 82 percent of the study area’s jobs. Out of that number, there are about 52,000 manufacturing jobs and 13,000 service sector jobs. The manufacturing jobs in Mesa de Otay account for almost one third of the manufacturing jobs in Tijuana.

About 17,000 people who work in Mesa de Otay’s manufacturing sector live in that subarea. These figures imply that the subarea is a significant labor draw for the rest of Tijuana. This is attributable to the maquiladora plant activity and its proximity to the border crossing. The Otay Mesa subarea has a total of 10,222 people employed. This subarea holds the second largest number of jobs in the study area and makes up 13 percent of the study area’s employment.

Table 13

<table>
<thead>
<tr>
<th>Subarea</th>
<th>2004 Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chula Vista – Otay Ranch South of Olympic Parkway</td>
<td>2,043</td>
</tr>
<tr>
<td>City of San Diego – Otay Mesa</td>
<td>10,222</td>
</tr>
<tr>
<td>County of San Diego – East Otay Mesa</td>
<td>2,434</td>
</tr>
<tr>
<td>City of Tijuana – Mesa de Otay</td>
<td>65,000</td>
</tr>
<tr>
<td><strong>Total Employment</strong></td>
<td><strong>79,699</strong></td>
</tr>
</tbody>
</table>

Source: SANDAG and IMPlan

* Alamar River data is being collected and will be available in fall 2006

Forecasted 2030 Employment

By 2030, it is forecasted that the number of employed people in the San Diego County portion of the study area will have increased from 14,699 to approximately 71,974. The largest numerical growth will be in the Otay Mesa subarea, where it is forecasted that the number of people employed will increase from 10,222 to 41,633. Substantial increases in employment also will occur in Otay Ranch and East Otay Mesa. East Otay Mesa’s employment population would increase from 2,434 to 19,344, while Otay Ranch’s employment population would increase from 2,043 to 10,997.

Employment projections are not available for the study area in Tijuana.
INTERREGIONAL TRAVEL

In late 2004 and early 2005, SANDAG conducted surveys of crossborder travelers at the San Ysidro, Otay Mesa, and Tecate POEs to assist in the development of a model that estimates economic impacts of border delays in the economy of the San Diego-Baja California region. People traveling in personal vehicles and buses, as well as individuals crossing on foot, were interviewed as they crossed from Mexico into the United States.

A total of 3,603 interviews were conducted between November 10 and December 12, 2004, as well as between January 18 and February 26, 2005. Of those interviews, nearly 2,600 took place at San Ysidro, approximately 900 at Otay Mesa, and about 160 at the Tecate POE. This chapter provides results from surveys conducted at the Otay Mesa POE and highlights differences from the overall survey responses.8

OTAY MESA PORT OF ENTRY: KEY FINDINGS OF CROSSBORDER TRAVEL SURVEYS

- Nearly 70 percent of crossborder travelers who cross at the Otay Mesa POE live in Mexico.

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8 SANDAG’s analysis of crossborder surveys conducted at the Otay Mesa Port of Entry for Estimating Economic Impacts of Border Wait Times at the San Diego-Baja California Border Region, 2006.
- 97 percent of respondents who live in Mexico began their trip in Tijuana.

- For people who live in Mexico, almost 32 percent of the trips had a destination in the City of Chula Vista, and another 20 percent of the trips were destined for San Ysidro. The community of Otay Mesa was the destination of 14 percent of the trips.

- For people who live in the United States, 87 percent of the trips had a destination in the City of Tijuana.  

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9 No chart is included for trip origins of crossborder travelers who live in the United States due to the large number of different origins.
On average, more than 60 percent of border crossings into the San Diego region via the Otay Mesa POE made by people who live in Mexico are for shopping or errands (63.1%), and nearly one out of four crossings are work or business trips (23.8%). The overall share of work trips for all respondents at San Ysidro, Otay Mesa, and Tecate POEs was 18.1%. Visiting friends and family also is a significant reason for crossing, and it accounts for almost one in five northbound crossings (19.8%).

The surveys revealed different patterns for crossings into Mexico. The most common trip purpose is visiting family or friends (58.7%), then shopping or errands (26.7%), followed by recreation or vacation (25%).
On average, in the previous 30 days, travelers who live in the United States crossed about eight times into Mexico, while travelers who live in Mexico crossed twelve times in the northbound direction. More than 38 percent of travelers who live in Mexico crossed more than ten times into the United States. About 22 percent of travelers who live in the United States crossed more than ten times in the southbound direction.

CONCLUSIONS

Survey results indicate that nearly 70 percent of travelers from Mexico who cross at the Otay Mesa POE have a destination in South San Diego County, they travel mainly for shopping or work purposes, and almost 40 percent cross the border frequently (more than ten times in a month). These travel patterns suggest transportation improvements in Tijuana that would facilitate access to the border crossing both for drivers and for transit users, including implementation of peak period transit services to serve commute trips. Similarly, in the San Diego region, completion of SR 905 and the South Bay Expressway, as well as continuation of the MTS Route 905 service and implementation of planned regional transit routes, such as the South Bay Bus Rapid Transit service, would serve the crossborder travel patterns identified in the survey. It is estimated that, on average, at least 30,000 commuters travel across the border on weekdays from Tijuana/Tecate.

The survey also shows that all crossborder travelers from the San Diego region who cross at the Otay Mesa POE travel in the City of Tijuana, either as the final destination or to reach Rosarito or Ensenada. They cross principally to visit family and friends, although shopping and vacation trips also are an important reason to cross. In addition, more than 20 percent are frequent crossers. Improvements to local streets in Tijuana, which would link the POE with the regional transportation network, would facilitate the shopping and social trips identified in the survey.
TRANSPORTATION

INTRODUCTION

This chapter describes the multimodal transportation network in the study area and provides background information on the transportation issues discussed at the binational workshops, which are listed below. It also includes early action strategies to begin to address them.

- Future East Otay Mesa – Otay II POE and connecting roads
- Improvements to existing Otay Mesa-Mesa de Otay POE and connecting roads
- Improvements to crossborder and regional public transportation services

EXISTING SETTING

The transportation network in the Otay Mesa-Mesa de Otay binational area serves commuter, shopping, tourist, and goods movement travel within the United States and Mexico, as well as crossborder travel via the Otay Mesa-Mesa de Otay POE. This POE is the main commercial crossing between California and Mexico. In addition, the Otay Mesa POE handles a significant amount of commuter and tourist traffic between San Diego and Tijuana. The San Ysidro POE is located west of the study area and is the busiest passenger border crossing along the U.S.-Mexico border. It handles about 70 percent of the vehicle crossings and more than 80 percent of people traveling on foot into the San Diego region.

Interstate 805 (I-805) and SR 905/Otay Mesa Road are the main highways that serve the Otay Mesa area, while the Tijuana-Tecate Toll Road and the Tijuana-Rosarito Corridor are the principal regional facilities in Mesa de Otay. Figure 4 shows the existing transportation network, while Figure 5 illustrates the planned transportation network and land uses within the study area.

Otay Mesa-Mesa de Otay POE

In 1985, the Otay Mesa POE was developed as a passenger and commercial POE. From 1985 to 1994, it handled only northbound cargo operations. In 1994, all southbound commercial cargo was rerouted from the Virginia Avenue gate at the San Ysidro POE to Otay Mesa. However, more than two decades after the federal inspection facilities began operating, the transportation network to serve this new POE still is under development. For many years, the only linkage between the POE and the regional highway system was via a four-lane city street, Otay Mesa Road, which was widened to six lanes in 1999. The only section of SR 905 extended to date includes approximately one mile between the Otay Mesa POE and Airway Road, including the interchange at Siempre Viva Road.

More than 6.8 million private vehicles and about 1.5 million pedestrians crossed northbound at the Otay Mesa border station in 2005. Also in 2005, the Otay Mesa-Mesa de Otay POE handled
$24.4 billion worth of goods in both directions that were transported in more than 1.4 million trucks. The Otay Mesa POE has the highest rank in California and the third rank along the entire U.S.-Mexico border in terms of value of trade.

**Figure 4**
**Current Transportation Network**
Passenger and commercial crossings from Mexico into the United States, as well as bilateral trade, have grown significantly over the years, as shown in Figures 6 through 9. A noticeable increase in passenger vehicle crossings has taken place in 2004 and 2005. Pedestrian crossings have more than doubled since 2001, after reaching a peak in 2002 as a result of a shift from vehicle to pedestrian crossings due to longer vehicular waits at the border following the 9/11 events.

Delays in crossing the border have increased and become more unpredictable over time. Border wait times – especially in the northbound direction – are a result of growth in crossborder travel and stricter security screenings, coupled with constraints in transportation infrastructure. A recent SANDAG study\textsuperscript{10} quantified economic opportunities lost because of current and projected traffic congestion and delays at the San Diego-Baja California POEs. In particular, current delays for both personal crossborder trips and freight movement cost the San Diego-Baja California region

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5}
\caption{Planned Land Use and Transportation Network}
\end{figure}

\textsuperscript{10} SANDAG, Estimating Economic Impacts of Wait Times at the San Diego-Baja California Border, 2006.
$4.2 billion in lost output and a loss of more than 42,000 jobs in 2005. If steps are not taken to improve border crossing and transportation infrastructure and management, these losses are projected to more than double in the next ten years.

Figure 6
Otay Mesa POE - Northbound Passenger Vehicle and Bus Crossings

![Graph showing Northbound Passenger Vehicle and Bus Crossings over the years](source)

Source: U.S. Customs and Border Protection, Field Operations Office (data represent federal fiscal year)

Figure 7
Otay Mesa POE: Northbound Pedestrian Crossings

![Graph showing Northbound Pedestrian Crossings over the years](source)

Source: U.S. Customs and Border Protection, Field Operations Office (data represent federal fiscal year)
**Figure 8**
Otay Mesa POE: Northbound Truck Crossings

![Graph showing the number of northbound truck crossings at Otay Mesa POE from 1985 to 2005.](image)

*Source: U.S. Customs and Border Protection, Field Operations Office (data represent federal fiscal year)*

**Figure 9**
Otay Mesa-Mesa de Otay POE: Two-Way Value of Trade

![Graph showing the two-way value of trade at Otay Mesa-Mesa de Otay POE from 1997 to 2005.](image)

*Source: U.S. Bureau of Transportation Statistics, Transborder Freight Data, 2006*
Figure 10 shows projected crossborder travel demand at the San Diego-Tijuana POEs. To provide additional crossborder travel capacity, a new POE has been proposed about two miles east of the existing Otay Mesa crossing. SR 11, an east-west extension of future SR 905, would connect the future East Otay Mesa-Otay II POE to a new facility in Tijuana, which would link to the Tijuana-Tecate Toll Road and the Tijuana-Rosarito Corridor.

Figure 10
San Diego-Tijuana POEs: Projected Crossborder Daily Vehicle Travel Demand (Two-Way)

Highways
I-805 is the main north-south corridor serving the Otay Mesa area. Scheduled to open in early 2007, the South Bay Expressway (SR 125 Toll Road) will provide a new north-south corridor linking the border area and new communities in eastern Chula Vista to the rest of the San Diego region. This toll road is being funded through a public/private partnership.

Interim SR 905 (SR 905/Otay Mesa Road) is the principal east-west facility and provides the only access to the Otay Mesa POE. Forty thousand to sixty thousand vehicles travel daily on this road between I-805 and the border crossing. Trucks represent about 15 percent of the traffic. The first segment of the SR 905 extension, from the Otay Mesa POE to Airway Road, opened to traffic in September 2005. Construction of the second segment, from east of I-805 to Airway Road, is scheduled to begin in early 2007 and will take three to four years to complete. Cost increases, especially related to right-of-way acquisition, have delayed the completion of this project.
The Tijuana-Tecate Toll Road is the principal east-west highway in Mesa de Otay. It begins in the Mesa de Otay district of Tijuana, ending east of the city of Tecate. It is a 22-mile, 4-lane, controlled-access highway. This highway continues as a free facility for 41 miles to La Rumorosa and as a 30-mile toll road to El Centinela, west of Mexicali.

Currently under construction, the Tijuana-Rosarito Corridor will link Mesa de Otay in Tijuana and Playas de Rosarito. A connection to the future Otay II POE is under evaluation. The entire 28-mile facility is anticipated to be completed in late 2006.

As described in the previous section, the proposed SR 11 would link the future East Otay Mesa POE to SR 905 and the South Bay Expressway.

**Transit**

MTS provides public transportation between the Otay Mesa POE, the Iris Trolley Station, and the San Ysidro Trolley Station every 30 minutes on weekdays during morning and afternoon peak periods. Service starts at 4:50 a.m. and ends at 7 p.m. However, there is no service between approximately 10 a.m. and 1 p.m. In 2005, nearly 441,000 passengers traveled on MTS Route 905. Figure 11 illustrates current and planned transit services within the study area. The proposed routes shown in Tijuana are part of the City’s Draft Public Transportation Plan.

As a result of the MTS Comprehensive Operational Analysis, improvements to bus Route 905 are scheduled to start on September 3, 2006. Most notably, Route 905 will operate throughout the day with 30-minute frequencies (instead of only morning and afternoon peak periods), extending the service until 8:25 p.m. During peak periods, additional service will be provided to serve Otay Mesa business parks (Route 905A). Also, there will be new transit service on weekends every 30 minutes.

The end point of Route 905 will be at the Iris Avenue Trolley Station, while Route 929 will provide service between the Iris Avenue Trolley Station and the San Ysidro Trolley Station. Route 929 will be increasing to 15-minute frequencies all day on weekdays and 30-minute service on weekends.

The planned South Bay Bus Rapid Transit (BRT) will provide direct service between the Otay Mesa POE and downtown San Diego. This BRT route would travel on the South Bay Expressway, I-805, and SR 94 and would serve the developing communities in eastern Chula Vista. Service between eastern Chula Vista and downtown San Diego would be implemented in 2010, and the extension to the Otay Mesa POE is anticipated to begin operating in 2015.

The potential for additional regional transit services in the Otay Mesa area will be evaluated as the City of San Diego continues its update of the Otay Mesa Community Plan in the next several months.
Airports

Two airports are located in the Otay Mesa-Mesa de Otay binational area. Brown Field is a general aviation airport and POE for private aircraft flying into the United States from Mexico. This airport is owned and operated by the City of San Diego. It has an 8,000-foot-long runway that can accommodate most aircraft and a second 3,000-foot-long runway.\(^\text{11}\)

The San Diego County Regional Airport Authority is updating Brown Field’s Airport Land Use Compatibility Plan (ALUCP). The ALUCP contains compatibility criteria and review procedures for compatibility concerns such as noise, overflight, safety, and airspace protection. The City of San Diego is responsible for implementing the ALUCP, ensuring consistency with the General Plan, and submitting projects for review by the Airport Land Use Commissions (ALUC). The Airport Authority anticipates adopting the final ALUCP in 2007.

Tijuana International Airport is a passenger and cargo airport with service to major cities in Mexico. It has a single runway of 9,800 feet with options to extend it up to 15,000 feet and to build a second runway. Tijuana International Airport handled nearly 3.4 million passengers in 2004.\textsuperscript{12}

Since the late 1990s, the concept of a crossborder passenger terminal has been discussed to provide easier access for travelers from the United States to the Tijuana International Airport. Travelers would park at a terminal that would be located in the community of Otay Mesa and proceed to the Tijuana Airport via a secured walkway. The South County Economic Development Council conducted the Crossborder Air Passenger Terminal Facility study in 1998. According to this study, a crossborder terminal would reduce vehicular congestion at the San Ysidro and Otay Mesa POEs by as much as three percent. Direct foreign flights would increase the economic activity along the Otay Mesa-Tijuana corridor and extend the operational life of the San Diego International Airport. Surveys conducted for this study at the Tijuana airport estimated that 1.09 million annual passengers originate from the Southern California region.\textsuperscript{13}

In December 2005, the possibility of the cross border terminal was discussed with Mexican government officials during a trade mission to Mexico City arranged by the San Diego Regional Chamber of Commerce’s Mexico Business Center. In July 2006, the San Diego County Regional Airport Authority’s Board accepted its Strategic Planning Committee recommendation to develop a scope of work for a crossborder terminal development with participation from other stakeholder agencies, including the operator of the Tijuana International Airport. The scope of work and cost estimate are anticipated to be presented to the Authority’s Board in September 2006 for action. Following approval from the Authority’s Board, staff would seek funding from the Federal Aviation Administration.\textsuperscript{14}

\textbf{Freight Rail}

There is no freight rail service within the study area. However, there is a crossborder "short-haul" railroad, the San Diego and Arizona Eastern (SD&AE) Railway, which connects San Diego to the north with Los Angeles and the nation’s intercontinental railway network via de Burlington Northern Santa Fe and Union Pacific Railways. In 2005, more than 6,000 carloads (equivalent to 48,000 truck trips) crossed the border predominantly in the southbound direction. The main commodities moved include liquefied petroleum gas, lumber, beverages, paper, grain, and sand.

The SD&AE Railway also connects San Diego with the Imperial Valley via the Tijuana-Tecate Railway (owned by Mexico) and the SD&AE Desert Line. Beginning in 2005, the Desert Line was opened to limited service (10 mph). Further rehabilitation of both the Desert and Tijuana-Tecate Lines and restoration to modern service is necessary to improve the market potential of this route for international and interstate movement of goods in, out, and through the Southern California/Baja California region.

\textsuperscript{12} http://www.aena.es/, accessed on 9/16/05.
\textsuperscript{13} South County Economic Development Council, Crossborder Air Passenger Terminal Facility, Phase I Report, 1998.
\textsuperscript{14} San Diego County Regional Airport Authority, Authority Board Meeting, July 24, 2006.
The proposed Desert Line improvements are not expected to significantly reduce the present amount of crossborder truck traffic on the region’s highways and arterials. However, rehabilitation of the Desert Line to modern service would likely attract companies with east-west shipping interests to locate in northern Baja California.\textsuperscript{15} In addition, proposals to expand port facilities at the Ports of San Diego and Ensenada (Mexico) would likely affect crossborder freight transportation, although those potential impacts have not been evaluated at this time.\textsuperscript{16}

As part of the development of the 2007 Regional Transportation Plan, SANDAG has prepared a draft Goods Movement/Freight Intermodal Strategy Issue Paper. One of the issues posed in this draft paper is whether rail alternatives should be considered to help reduce (or divert) the existing volume of crossborder trucks. Input from stakeholders and policy direction from the SANDAG Board of Directors on this and other freight issues will be sought in the next several months.

FUTURE EAST OTAY MESA – OTAY II POE AND CONNECTING ROADS

Development of a POE is a complex and lengthy undertaking which involves close coordination and collaboration with governmental agencies on both sides of the international border at the federal, state, regional, and municipal levels. Project development includes the border stations in each country and roads connecting those border stations to the regional transportation network. Various entities are responsible for different planning, permitting, and implementation activities in the United States and Mexico.

Status of the Proposed East Otay Mesa-Otay II POE

An early recognition of the need to plan for additional border transportation infrastructure is the letter of intent signed in 1998 by Caltrans, SANDAG, the County of San Diego, the City of San Diego, the Baja California Secretariat of Human Settlements and Public Works (Secretaría de Asentamientos Humanos y Obras Públicas del Estado de Baja California or SAHOPE\textsuperscript{17}), and the Municipalities of Tijuana and Playas de Rosarito to preserve the binational highway corridor created by SR 11/SR 125 and the Tijuana-Rosarito Corridor, including support for the creation of a new POE designated as East Otay Mesa-Otay II.

United States

In 2000, Caltrans prepared a project study report (project development support) for SR 11, which would connect the East Otay Mesa border station to the regional roadway network (SR 905 and SR 125), as well as provide local area access. In 2001, Caltrans also submitted an application to the U.S. Department of State (DOS) for a New Port of Entry at East Otay Mesa.\textsuperscript{18}

\textsuperscript{15} SANDAG, 2030 Revenue Constrained Regional Transportation Plan: 2006 Update, 2006.
\textsuperscript{16} There is also a proposal for a new Baja California seaport at Punta Colonet, south of Ensenada, which would have a rail connection to Mexicali.
\textsuperscript{17} SAHOPE was restructured and is now called Secretaría de Infraestructura y Desarrollo Urbano Estatal/Secretariat of Infrastructure and Urban Development or SIDUE.
\textsuperscript{18} At the time of submittal in 2001, Presidential Permits were not required for land crossings (crossings without a bridge). However, requirements for new land crossings were similar to those for projects requiring Presidential Permits, particularly with regard to environmental documentation and were evaluated through the same interagency process. In 2004, Executive Order 13337 was signed requiring Presidential Permits for land border POEs. DOS is developing new guidance...
In 2002, a Biological Constraints Report for SR 11 was completed. Spring biological surveys were conducted in 2005. A consultant was hired in November 2005 to prepare the environmental document.

In December 2005, Caltrans District 11 – as the East Otay Mesa POE project sponsor – met with the White House Council on Environmental Quality (CEQ) and other federal agencies to discuss the coordination of the presidential permit and environmental clearance processes for the East Otay Mesa POE and SR 11. At this meeting, it was agreed that Caltrans would conduct the environmental work for SR 11 to comply with the California Environmental Quality Act (CEQA) and would work as co-lead with the U.S. Federal Highway Administration (FHWA) to comply with the National Environmental Policy Act (NEPA) requirements.

At this meeting, it was also confirmed that the East Otay Mesa POE had been included in the U.S. Customs and Border Protection (CBP) five-year Capital Improvement Plan. Inclusion in this plan allows CBP to request that the U.S. General Services Administration (GSA) commence work on the project (e.g., preparation of standard prospectus, feasibility study, and design process). GSA has requested correspondence from CBP (Field Operations and the Office of Finance) stating that they would like GSA to move forward with the project development process for the East Otay Mesa POE.

U.S. DOS coordinates with the Government of Mexico through the Secretariat of Foreign Relations (SRE) and the Embassy of Mexico on issues affecting the U.S.-Mexico border. U.S. DOS communicates with the Government of Mexico via diplomatic notes. In January 2006, U.S. DOS sent the Embassy of Mexico a diplomatic note stating the interest of the U.S. federal government in the construction of a new border crossing at East Otay Mesa. A response from the Government of Mexico was forwarded to U.S. DOS in May 2006 indicating the Mexican government’s interest in conducting the necessary feasibility studies on both sides of the border.

As part of a recommended follow-up from the December 2005 meeting with the White House CEQ in January 2006, Caltrans District 11/U.S. DOS established a U.S. interagency working group that meets regularly to coordinate environmental clearance, the Presidential Permit process, and other project planning activities on the U.S. side of the border. The working group has been meeting bimonthly and includes federal, state, and regional stakeholders involved in the development of SR 11 and the proposed new POE.

The proposed East Otay Mesa POE and SR 11 are currently in the environmental phase. Caltrans has met with various federal agencies to discuss the NEPA process. To accelerate the development of the project, it has been agreed that Caltrans will prepare a tiered or programmatic environmental document. The first phase will consist of a preliminary environmental document that will cover the footprint for both the POE and SR 11. This will allow for protection of the corridor and will improve the ability to compete for capital funding. The second phase would be project-level environmental documents developed separately for each portion of the project.

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for the Presidential Permit process for land border POEs. Presidential approval and signature are not necessary. Permits are signed by the United States’ Secretary of State and by Mexico’s Secretary of Foreign Relations.
Mexico

In 2002, SCT conducted a preliminary feasibility study to assess cargo operations at the existing Mesa de Otay POE and future Mexican General Customs Administration (Aduanas) needs in Tijuana, based on forecasts of trade and truck traffic.\(^{19}\) This study projected that approximately 7,600 average daily trucks would travel across the San Diego-Tijuana border in 2010, which would represent three times the truck volume in 1995. By 2020, an average of 11,500 crossborder trucks would travel daily. A conclusion of this study is that pressure on border transportation infrastructure will continue to be strong, and a new POE at Otay II should be implemented expeditiously. Additional studies for the future Otay II POE were developed by SIDUE, the Autonomous University of Baja California (Universidad Autónoma de Baja California or UABC), and SCT.

IMPlan coordinated the preparation of a partial program for the Improvement of Mesa de Otay Este (Programa Parcial de Mejoramiento de la Mesa de Otay Este), which covers the period between 2004 and 2025. This document considered the location of the future Otay II POE in Mesa de Otay Este. It also developed a circulation study to analyze three alternatives to link the proposed POE to Tijuana's regional transportation network.\(^{20}\)

Concurrently with the preparation of the partial program, in August 2005, the Municipality of Tijuana issued a resolution that restricts the use of a 37-hectare parcel adjacent to the international border in Mesa de Otay Este for the future Otay II POE.\(^{21}\)

SIDUE also has prepared a scope of work for the development of an economic and financial study for the Otay II POE. SIDUE is seeking funding to conduct this study. Caltrans and SANDAG are conducting a financial feasibility assessment for the proposed SR 11 and East Otay Mesa POE.

In Tijuana, the Industrial Maquiladora Association (Asociación de la Industria Maquiladora or AIM) has been coordinating activities related to the future Otay II POE with the public and private sectors.

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\(^{19}\) Secretariat of Communications and Transportation (Secretaría de Comunicaciones y Transportes), Análisis para el Puerto Fronterizo de Otay II, 2002.

\(^{20}\) Secretaría de Desarrollo Urbano and IMPlan, Programa Parcial de Mejoramiento de la Mesa de Otay Este, en la ciudad de Tijuana, Baja California, 2005.

\(^{21}\) XVIII Ayuntamiento de Tijuana, Declaratoria de Destino para la Localización del Puerto Fronterizo Otay II, 2005.
IMPROVEMENTS TO OTAY MESA-MESA DE OTAY POE AND CONNECTING ROADS

Background

In 2004, Caltrans District 11 completed the Transportation Infrastructure and Traffic Management Analysis of Cross Border Bottleneck Study (Bottleneck Study) at the request of the U.S.-Mexico Joint Working Committee (JWC). The Bottleneck Study responded to the U.S.-Mexico Border Partnership Action Plan and, specifically, to Action Item 2 of the 22-Point Smart Border Action Plan, which calls for developing a prioritized list of infrastructure projects and taking immediate action to relieve bottlenecks. In addition, Caltrans carried out the Phase I case study of the San Diego-Tijuana Gateway and identified a number of improvements in the operational efficiency and flow of vehicles traveling across the Otay Mesa Commercial POE and the San Ysidro POE.

Recommendations for southbound flow at the Otay Mesa-Mesa de Otay Commercial POE mostly focused on improving unsignalized traffic intersections, access leading to the U.S. export facility, and the re-routing of commercial empties within the Mexican import facility. For northbound truck traffic, the recommendations focused on operational improvements. In the area between Mexico’s Export facility and U.S. Import facility, a need was identified to increase the capacity for trucks leaving from the Mexican export to the U.S. import facilities from three to four lanes, and ultimately to eight lanes for a more efficient use of the existing inspection gates. Another improvement identified at this location is to re-route empty trucks to avoid entering secondary inspection compound and passing through a new x-ray and CBP booth to expedite the processing of empty commercial vehicles. In 2005, the U.S.-Mexico JWC accepted the Bottleneck Study and its methodology for borderwide use.

Proposed Improvements to Otay Mesa-Mesa de Otay Commercial POE

To follow up on the work conducted by Caltrans in the Bottleneck Study, several coordination meetings were held with participation from CBP, Mexican Customs, Caltrans, and SANDAG staff to review possible improvements within the Otay Mesa-Mesa de Otay Commercial POE. Figure 12 illustrates the capital and operational improvements jointly reviewed.

Caltrans has prepared a draft project study report for improvements within the U.S. import yard at the Otay Mesa border station. This project includes the following components: add approaches and gates for two regular inspection booths; extend the existing Free and Secure Trade (FAST) lane; add another FAST lane north of the existing one; and stripe KEEP CLEAR zones at major changes of direction to help operational efficiency. The project components are shown in Figure 11 as items 6a and 6b. Caltrans will conduct additional preliminary engineering and environmental tasks in 2006. The project is anticipated to be operational in June 2007.

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22 The JWC was created through a memorandum of understanding between the U.S. Department of Transportation and Mexico’s Secretariat of Communications and Transportation in 1994. The JWC consists of transportation and planning representatives from the ten border states (four in the United States and six in Mexico), the U.S. Federal Highway Administration, U.S. Department of State, Mexican Secretariat of Communications and Transportation, and the Mexican Foreign Ministry. The formal charge of the JWC is “analyzing, developing, and coordinating border transportation plans and programs reflecting the needs of both countries.”


24 FAST is a commercial process offered by CBP to pre-approved importers, carriers, and registered drivers that results in quicker clearance across the border.
Figure 12
Proposed Capital and Operational Improvements at the Otay Mesa-Mesa de Otay Commercial Port of Entry
CROSSBORDER AND REGIONAL PUBLIC TRANSPORTATION SERVICES

South Bay BRT

The South Bay BRT project is one of the highest priority transit projects in the 2030 Regional Transportation Plan (RTP) and the TransNet Early Action Program (EAP). The South Bay BRT will provide high-speed transit connections between downtown San Diego and the Otay Mesa POE along the I-805 Managed Lanes and a dedicated transitway through eastern Chula Vista.

Figure 13 illustrates the South Bay BRT Corridor. The long-range plan envisions the BRT providing access to regional employment centers in downtown San Diego, residential and commercial areas in National City, transit-oriented villages in Otay Ranch, the future Otay Ranch Eastern Urban Center, the Otay Mesa Business Park, and the Otay Mesa POE. The TransNet Extension provides capital and operating funding for the first phase of this project between downtown San Diego and the Eastern Urban Center in Chula Vista beginning in 2010. A description of the second phase of this project, or the Otay Mesa segment, is provided in the section below.

Phase II: Otay Mesa Segment

South of the Eastern Urban Center, the southernmost station in the Otay Ranch development would serve a future major university or multi-purpose university center. South of this university station, the BRT would access the SR 125 toll road at the Otay Valley Road interchange. The South Bay BRT would then exit SR 125 at the Otay Mesa Boulevard station just south of SR 905. The route would continue for one mile to a station at the Otay Mesa POE. The Otay Mesa segment is expected to begin operations in 2015.

Otay Mesa POE Paseo de la Amistad Pedestrian and Bicycle Circulation Alternatives Study

SANDAG, MTS, and the City of San Diego have been coordinating efforts with Caltrans on the Otay Mesa POE Paseo de la Amistad Pedestrian and Bicycle Circulation Alternatives Study. This study is evaluating bicycle and pedestrian circulation improvements in the vicinity of the Otay Mesa passenger border crossing, including the extension of a pedestrian bridge along the west side of SR 905. Figure 14 illustrates existing bicycle and pedestrian circulation and highlights proposed pedestrian bridge and streetscape enhancements.

As part of this project, a parcel of land has been identified for a South Bay BRT transportation center that would be immediately adjacent to the pedestrian bridge under evaluation and would connect the border area with the transit station. The property is currently for sale. Because of its ideal size and location, SANDAG has hired a consultant to develop an appraisal with the potential to make an offer for this property. While it is desirable to move quickly on the parcel due to the limited locations near the border, there could be implications for potential Federal Transit Administration (FTA) funding for the project as a result of advanced acquisition. If it is determined that an offer should be made, a recommendation will be presented to SANDAG’s Transportation Committee for action.

25 SANDAG, South Bay Bus Rapid Transit Project Status, April 2006.
Figure 13
South Bay Bus Rapid Transit Corridor

[Map of the South Bay Bus Rapid Transit Corridor with markers for various locations such as Downtown, Golden Hill, 18th St, 47th St, Palomar, Otay Ranch Villages, Otay Mesa, and Border Crossing. The map also indicates Phase I and Phase II.]
Figure 14
Paseo de la Amistad Pedestrian and Bicycle Circulation Alternatives
City of Tijuana’s Draft Public Transportation Plan

One of the objectives of the partial program for the Improvement of Mesa de Otay Este is to improve the accessibility and mobility of people and goods for local and regional travel, as well as crossborder travel, giving high-priority to public transportation. In addition, the Partial Program identifies the Industrial Zone as the most important job center in Mesa de Otay and proposes to improve its transportation facilities, transit services, and urban image.26

A strong demand for transportation facilities and transit services in the City of Tijuana requires administration, control, and planning actions that could be implemented gradually over time. Restructuring transit services to meet the travel patterns of the residents represents a challenge.27

The City of Tijuana has identified several current issues related to public transportation services,28 which include saturated streets and roads due to growth in vehicular traffic, transit boardings in inadequate places, an older bus fleet, congested travel lanes due to the lack of schedules for transit routes, as well as deficient control of transit operations.

An origin and destination survey revealed that the mode share for walking trips is estimated at nearly 42 percent, while 32 percent of the trips are auto trips. Fixed-route transit trips account for nearly 18 percent of the trips. Four percent of the trips are made by bicycle.

To analyze travel patterns within the city, 14 basins, or travel zones, were delineated. Zone numbers 8 and 9 correspond generally with Mesa de Otay Este and the Alamar River zone, as shown in Figure 15. Several transit routes are proposed in each of these zones. The City of Tijuana’s evaluation proposes a phased restructuring of the City’s transit services.

EARLY ACTION STRATEGIES

ISSUE— 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

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26 Secretaría de Desarrollo Urbano and IMPlan, Programa Parcial de Mejoramiento de la Mesa de Otay Este, Pages 14 and 15, 2005.
27 City of Tijuana, Estudio Integral para la Reestructuración de Rutas de Transporte Público de Pasajeros en el Municipio de Tijuana (2004-2025).
28 Transit services are provided by private operators under concession agreements with the City of Tijuana.
Figure 15
City of Tijuana’s Travel Zones
Under the umbrella of the San Diego-Tijuana Border Liaison Mechanism (BLM), the Consulate General of Mexico in San Diego and the U.S. General Consulate in Tijuana would request that the Binational Group on Projects of International Ports of Entry (California – Baja California Region), under the Infrastructure and Ports of Entry Committee, establish a Technical Commission. This Technical Commission would be responsible for coordinating planning and implementation activities for the new POE and connecting transportation facilities on both sides of the border. Figure 16 illustrates the organizational chart of the San Diego-Tijuana BLM. Proposed objectives of the East Otay Mesa-Otay II POE Technical Commission are outlined below:

- Identify the planning process that needs to take place on both sides of the border to effectively implement the new POE and connecting roads.
- Prepare a joint work program and master calendar of tasks to align implementation activities for the new POE, including connecting roads and land acquisition on both sides of the border.
- Identify or confirm the lead agency for each task.
- Facilitate the dissemination and sharing of information on ongoing and future planning and implementation activities.
- Evaluate the feasibility of financing the POE and connecting roads on both sides of the border through public private partnerships, including tolls, developers’ contributions, or other innovative financing mechanisms.
- Evaluate the feasibility of utilizing innovative crossborder strategies to mitigate environmental impacts of transportation facilities.

**Technical Commission Representatives**

Initially, the East Otay Mesa-Otay II POE Technical Commission would include executive level staff from the following agencies:

- **United States**
Figure 16
Organizational Chart of the San Diego-Tijuana Border Liaison Mechanism
Mexico
Secretariat of Exterior Relations (Secretaría de Relaciones Exteriores), Consulate General of Mexico in San Diego, Secretariat of Communications and Transportation (Secretaría de Comunicaciones y Transportes), General Customs Administration (Aduanas), National Migration Institute (Instituto Nacional de Migración), Institute for Management and Appraisals of Federal Properties (Instituto de Administración y Avalúos de Bienes Nacionales), Office of the Governor of Baja California, Secretariat of Infrastructure and Urban Development of Baja California (Secretaría de Infraestructura y Desarrollo Urbano del Estado), Municipality of Tijuana, Municipal Planning Institute of Tijuana (Instituto Municipal de Planeación), and Municipality of Playas de Rosarito.

Other agencies may be invited to participate on specific tasks as work progresses.

The San Diego-Tijuana BLM would call meetings of the East Otay Mesa-Otay II POE Technical Commission as needed to share progress on the activities under their guidance.

An initial set of studies and activities that would be conducted has been identified, as shown below.

- SR 11 and East Otay Mesa POE programmatic or tiered Environmental Impact Report (EIR)/Environmental Impact Statement (EIS).
- Feasibility Study for Otay Mesa and East Otay Mesa Border Stations (GSA’s Functionality Study).
- Otay II POE Technical Feasibility Study (INDAABIN’s Functionality Study).
- Financial Feasibility Assessment for the East Otay Mesa-Otay II POE and connecting transportation facilities and Otay II POE Financial Feasibility Study.
- Land Use/Open Space Conservation Study for SR 11 potential alignments.
- Land acquisition for the Otay II POE.

### ISSUE
Improvements to existing Otay Mesa-Mesa de Otay POE and connecting roads

### EARLY ACTION
Coordinate with CBP 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

As shown on Figure 11, several capital and operational projects have been identified to improve the efficiency of commercial inspections at the Otay Mesa-Mesa de Otay border crossing. Caltrans is leading the implementation of two of those projects in the Otay Mesa border station. In cooperation with
Caltrans, SANDAG proposes to continue coordination efforts with CBP, GSA, and Mexican Customs toward funding and implementing the remaining improvements at the U.S. and Mexican border stations.

**LEAD/PARTICIPATING AGENCIES**— SANDAG, Caltrans, CBP, GSA, Mexican Customs

**EARLY ACTION**— Explore the feasibility of short-term operational and capital improvements at the Otay Mesa-Mesa de Otay Passenger POE (operations and facilities)

SANDAG proposes to collaborate with CBP, GSA, Caltrans, and Mexican Customs to explore the feasibility of identifying short-term operational and capital projects to improve travel flows and the efficiency of security screenings at the passenger inspection facilities.

**LEAD/PARTICIPATING AGENCIES**— SANDAG, Caltrans, CBP, GSA, Mexican Customs

**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

As described in earlier chapters, the City of San Diego is analyzing three alternative scenarios that contemplate a range of industrial, commercial, and residential land uses. SANDAG proposes to work together with the City of San Diego, Caltrans, and MTS on the evaluation of future travel demand in the Otay Mesa corridor to serve the proposed alternative land uses.

**LEAD/PARTICIPATING AGENCIES**— City of San Diego, SANDAG, Caltrans, MTS

**ISSUE**— Improvements to crossborder 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

In its Draft FY 2007 Overall Work Program, SANDAG proposes to conduct advanced planning, including studies of right-of-way requirements, station siting, and priority measures at the border for the Phase II: Otay Mesa segment of the South Bay BRT.

**LEAD/PARTICIPATING AGENCIES**— SANDAG, City of Chula Vista, City of San Diego, Caltrans, MTS
**EARLY ACTION**— Complete the Otay Mesa POE Paseo de la Amistad Pedestrian and Bicycle Circulation Alternatives Study. To complement this study, perform right-of-way engineering services, including title, appraisal, and potential acquisition negotiations for a parcel in the vicinity of the Otay Mesa POE where a proposed South Bay BRT Transportation Center would be located

**LEAD/PARTICIPATING AGENCIES**— Caltrans, SANDAG, MTS, City of San Diego

**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

As described in this chapter, the City of Tijuana has evaluated trip origins and destinations, as well as travel modes and patterns within the city. An evaluation of the transit routes proposed to serve the Otay Mesa-Mesa de Otay POE, as well as consideration of transit services to and from the San Ysidro POE, is proposed to be conducted. This analysis also would take into account existing and planned transit services in South San Diego County.

**LEAD/PARTICIPATING AGENCIES**— SANDAG and IMPlan
ECONOMIC DEVELOPMENT

INTRODUCTION

Two of the economic development issues discussed at the binational workshops are to promote creation or expansion of common employment clusters on both sides of the border and to address future industrial land use supply and demand. This chapter provides background information on these issues and proposes early action strategies to begin to address them.

EXISTING SETTING

The Otay Mesa-Mesa de Otay binational area is home to the busiest commercial border crossing between California and Mexico. The Otay Mesa POE handled $24.4 billion worth of freight in 2005, which represents the third highest dollar value of trade among all land border crossings between the United States and Mexico. The Otay Mesa POE also accommodates the second largest volume of passenger vehicles and buses between California and Mexico, after the San Ysidro border crossing. Crossborder travel contributes to economic activity on both sides of the border since the predominant reasons for crossing the border are for shopping, work, or social visits, in addition to goods movement.

The border crossing is the main conduit for the economic relationship of the San Diego-Tijuana region. Structural and economic differences between San Diego and Tijuana have been capitalized over the years to provide the binational region with a competitive advantage in the global economy. The San Diego region relies on the labor force available in Mexico, while Tijuana’s economy benefits from employment opportunities in San Diego. Anecdotal evidence suggests that the Tijuana housing market may be filling a gap in affordable housing in the San Diego region, bringing about increased crossborder commuting for work.

However, as described in the Transportation chapter, congestion and delays to cross the border have increased and become more unpredictable over time. Traffic congestion and wait times at the San Diego-Baja California POEs for both personal crossborder trips and freight movement cost the binational region $4.2 billion in lost output and a loss of more than 42,000 jobs in 2005. If steps are not taken to improve border crossing and transportation infrastructure and management, these losses are projected to more than double in the next ten years.

The Maquiladora program has supported economic development in Baja California, particularly in Tijuana. Established in the mid 1960s, this program allows plants in Mexico to temporarily import component parts from the United States or other countries and then to export the products. Maquiladoras rely on comparatively lower-cost Mexican labor to assemble, process, or manufacture.

goods. The maquiladora industry not only has created employment opportunities in Baja California, but also in the San Diego region, including the Otay Mesa area.

The Otay Mesa-Mesa de Otay area has the opportunity to play a major role in the economic development of the San Diego-Tijuana region. Land use and employment data shown earlier in this report indicate that the City of San Diego’s Otay Mesa and the County of San Diego’s Otay community planning areas, as well as eastern Chula Vista contribute a large supply of developable industrial, commercial, and office lands. Employment is forecast to grow significantly by 2030 in these areas from nearly 14,700 jobs in 2004 to almost 72,000 jobs in 2030. Mesa de Otay, in Tijuana, also includes industrial land uses in the vicinity of the existing and planned border crossings and already is an important job center in the City of Tijuana with about 65,000 jobs in 2004.

EXISTING PLANS AND PROGRAMS

The San Diego region, as well as the City of Tijuana and the State of Baja California, have identified export-oriented industrial clusters. Industrial clusters are groups of complementary, competing, and interdependent industries that drive wealth creation in a region, primarily through export of goods and services. This section describes relevant plans on both sides of the border that evaluate industrial clusters.

San Diego Regional Economic Evaluation and Prosperity Strategy

The REPS is an extensive analysis of the San Diego regional economy that provides a historical context of local economic performance and a current snapshot of the San Diego economy. A comparative analysis with other metropolitan areas across the United States on a wide selection of indicators creates a benchmark with which to compare San Diego. Through this analysis, REPS identifies challenges facing the San Diego region and offers a set of recommended actions designed to meet these challenges.

The current REPS examines San Diego by four major indicator categories, which are listed below along with examples of each type of indicator.

- **Social and Economic Performance**
  - Population: change and characteristics
  - Labor Force
  - Personal Income
  - Employment
  - Poverty
  - Consumer Price Index/Inflation

- **Business Vitality**
  - Gross Regional Product
  - Industrial Wage and Salary
  - New Business Licenses/Bankruptcy Filings
  - Labor Force Productivity

- **Economic Development Capacity**
  - Educational Attainment
  - Residential Density
  - Housing
  - Affordability
  - Air Quality

- **Regional Infrastructure Capacity**
  - Commute Time
  - Infrastructure Investment
  - Regional Capital Improvements
  - Educational Expenditures

Driving the San Diego regional economy are 16 export-oriented industrial clusters, which are listed below.

- Biomedical Products
- Biotechnology and Pharmaceuticals
- Communications
- Computer and Electronics
- Defense and Transportation Equipment
- Design
- Entertainment and Amusement
- Environmental Technology
- Financial Services
- Fruit and Vegetables
- Horticulture
- Publishing
- Recreational Goods
- Software
- Specialty Foods
- Travel and Hospitality

The 1998 Prosperity Strategy recommended a set of actions related to infrastructure investment and regulatory reform. Related to economic development in the San Diego-Baja California border region, Action 6 recommends improving “the collaborative effort on the part of private sector organizations and government agencies that are jointly responsible for maintaining and improving the region’s access to domestic and international markets. Included in these discussions should be representatives from the Republic of Mexico.”

To evaluate the Prosperity Strategy, SANDAG produces a Sustainable Competitiveness Index, which was last updated in 2005. Currently, SANDAG is collecting and analyzing data to identify regional strengths and weaknesses. SANDAG will be relying on this information to update the Prosperity Strategy in 2006.

Previous Prosperity Strategy reports tracked San Diego’s progress through the economic restructuring of the mid to late 1990s. In 1998, the Prosperity Strategy tracked San Diego’s emergence from the economic restructuring of the 1990s as a world-class, high-technology economy. The San Diego region faces new challenges, which require analysis and the development of strategies to improve the San Diego region’s economic performance. This examination will be the focus of the 2006 San Diego Regional Economic Evaluation and Prosperity Strategy, which is an element of SANDAG’s RCP.

**Otay Mesa Community Plan Update**

SANDAG currently is updating the 2030 Regional Growth Forecast based on recent local demographic and economic trends, a new forecast of the U.S. economy, and updates to local general and community plans. Between 2005 and 2030, the San Diego region is expected to grow by almost one million people, add 285,700 new homes, and add 456,200 new jobs.32

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Table 14 shows the current data and forecast results.

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<thead>
<tr>
<th>Table 14</th>
<th>Regional Forecast Results</th>
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<tbody>
<tr>
<td></td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Numeric</td>
</tr>
<tr>
<td>Total Population</td>
<td>3,051,280</td>
</tr>
<tr>
<td>Housing Units</td>
<td>1,108,500</td>
</tr>
<tr>
<td>Total Employment</td>
<td>1,382,671</td>
</tr>
</tbody>
</table>

Source: SANDAG, 2030 Regional Growth Forecast Update, May 2006

Results from the regional forecast suggest that there is an imbalance in current plans between areas identified for future residential and employment growth. Over the forecast, the region fully develops all of its residential capacity. In 2030, however, there is still enough land designated for employment (17,000 acres) to locate over 228,000 jobs.

As described earlier in this report, as part of its update of the Otay Mesa Community Plan, the City of San Diego is considering several land use alternatives that would result in more land designated for residential uses and, concurrently, would reduce industrial acreage. These alternatives would accommodate between 12,400 housing units (No Project Alternative) and 31,800 units (Alternative 2). Industrial zoned land would range between 1,990 acres (Alternative 2) and 2,900 acres (No Project Alternative). The City of San Diego is conducting outreach activities to obtain community input regarding the plan update.33

The Otay Mesa Community Plan update presents an opportunity for an evaluation of the future demand of land for high value industrial clusters, while also taking into account competing demand for residential uses.

Development Plans for the City of Tijuana and the State of Baja California

The City of Tijuana’s Municipal Development Plan includes policies, objectives, strategies, and actions to guide the municipal administration over the three-year period from 2005 through 2007. An objective of the 2005-2007 Municipal Development Plan is to promote the creation of industrial clusters in six strategic areas, such as automotive industry, medical products, wood products, electronic industry, software, and information technologies.34

This plan also calls for fostering the preparation of strategic plans to develop clusters in cooperation with the federal, state, and private sectors.

33 City of San Diego Otay Mesa Community Planning Workshop, July 2006.
One of the economic development objectives of the State of Baja California Development Plan is to improve the state’s industrial competitiveness. The State of Baja California has identified export-oriented industrial clusters in the Municipality of Tijuana, and several of those clusters coincide with the ones included in the City of Tijuana’s Municipal Development Plan, such as the electronic industry, medical products, and automotive parts.

Table 15 highlights the commonality of the industrial clusters in the San Diego-Tijuana region.

### Table 15

**Shared Export-Driven Industrial Clusters in the San Diego Region and Tijuana**

<table>
<thead>
<tr>
<th>San Diego Region</th>
<th>Tijuana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Software</td>
<td>2. Software and Information Technologies</td>
</tr>
<tr>
<td>3. Computer and Electronics</td>
<td>4. Electronic Industry</td>
</tr>
<tr>
<td>5. Biomedical Products</td>
<td>6. Medical Products</td>
</tr>
</tbody>
</table>

**Crossborder Innovation and Competitiveness Initiative**

San Diego Dialogue’s Crossborder Innovation & Competitiveness Initiative is a multi-year effort to explore the concept that the San Diego-Baja California region will be more globally competitive in key science and technology sectors by leveraging economic development opportunities linking both sides of the border. This concept includes not only crossborder research partnerships, but also catalyzing connections between the San Diego and Baja California economies in high value-added sectors that link the Research and Development (R&D) capabilities to manufacturing and service industries in our region.

In early 2006, San Diego Dialogue – in partnership with CENTRIS and CICESE – completed a research project that identified “clusters of opportunity” with the potential to help the San Diego-Baja California region better compete in the global economy. This is the first major project conducted to advance the Crossborder Innovation and Competitiveness Initiative.

Borderless Innovation identified clusters of opportunity in high value-added sectors on both sides of the border, which could stimulate new kinds of industry partnerships and institutional alliances that could be beneficial to both Baja California’s economic growth and the continued competitiveness of San Diego’s high tech economy. A new Innovation Corridor of the Californias would be promoted through collaborative efforts to promote a new vision of the regional economy.

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38 CENTRIS is an economic development collaborative in Tijuana. Centro de Investigación Científica y de Educación Superior de Ensenada or CICESE is a federally funded science and technology research center.
Borderless Innovation identifies biomedical devices, aerospace and defense, software, marine biotechnology, and clinical research as the most promising areas of collaboration. Additional clusters with potential for collaboration and joint marketing include: energy and environmental technologies, recreation and sporting goods, semiconductor manufacturing, and automotive.

The study presents three major findings outlined below:

1. There is a need for aggressive and collaborative marketing efforts describing the high value-added crossborder clusters in the region focused on high-tech and biotech industries interested in the physical proximity to all the components of the innovation ecosystem — from R&D to manufacturing and distribution.

2. Leadership from both sides of the border needs to come together to work collaboratively to significantly expand the research, technical assistance, professional, and workforce education programs essential to assuring sustainable growth and competitiveness.

3. New social and institutional mechanisms are needed to move the crossborder region beyond symbolism into action — action which involves shared leadership, co-investment, and well-orchestrated programs that build the competitiveness capacity of the cross-border region.

To create the Innovation Corridor of the Californias, Borderless Innovation includes ten recommendations, which are listed below:

1. Creation of a Crossborder Innovation and Competitiveness Center;

2. Launching a crossborder program to foster scientific and technology relationships, awareness of research, and commercialization of discoveries;

3. Providing ongoing research and analytical reports on crossborder clusters;

4. Working with Baja California to establish crossborder clinical research as a precursor to growing a transregional biopharmaceutical industry;

5. Promoting private investor networks in the Californias;

6. Promoting “smart border” technologies and infrastructure;

7. Expansion of existing and new crossborder education and research linkages;

8. Harmonization of economic, health, and education data;

9. Convening a high-level working group to assess the feasibility of a Californias model based on Costa Rica’s successful INBio program for conservation and sustainable development; and

10. Exploration of broader, non-technological economic linkages.

The study also identifies a number of major challenges for achieving a dynamic and competitive Innovation Corridor of the Californias. The most significant of these is assuring a secure and efficient border that enables frequent and rapid border crossings.
**EARLY ACTION STRATEGIES**

**ISSUE**— Promote creation or expansion of common employment clusters on both sides of the border and address future industrial land use supply and demand


In May 2006, the SANDAG Board of Directors approved the Regional Economic Evaluation and Prosperity Strategy Working Group, which will provide technical expertise and background knowledge of the regional economy and factors that contribute to its performance. This Working Group will participate in forming an evaluation framework for measuring progress and comparing the San Diego region against its competitors. It also will develop recommended actions for infrastructure investments and public policy support to strengthen the San Diego region’s economic foundation.

Involvement of representatives from a cross section of agencies and organizations that are integral to the economic structure of the San Diego region is considered vital to the success of the Prosperity Strategy. Opportunities to foster collaboration among governmental agencies, business groups, and academia in the San Diego-Tijuana binational region will be explored in order to develop shared strategies to improve trade related infrastructure improvements and to advance the development of common crossborder industrial clusters.

**LEAD/PARTICIPATING AGENCIES**— SANDAG, Regional Economic Evaluation and Prosperity Strategy Advisory Working Group

**EARLY 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

**LEAD/PARTICIPATING AGENCIES**— City of San Diego, SANDAG

**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

**Establish the Crossborder Innovation and Competitiveness Center**

As described in Borderless Innovation, this Center is envisioned as a binational, nonprofit entity that would serve as a catalytic agent for an integrative economic growth strategy in the binational region of the Californias, operating
a core set of research, education, and networking programs, and providing funding through re-granting to organizations focused on crossborder issues. The Center would support regional groups in capacity-building efforts in four key areas:

- Research of regional significance (e.g., binational economic indicators, crossborder cluster analyses and tracking developments in science and technology that affect the region’s future);
- Technical assistance to enhance the capacity of firms on both sides of the border to build world-class capabilities and the tools and strategies essential to successful crossborder partnerships;
- Development of binational workforce education and training programs that meet the needs of dynamic crossborder industries; and
- Promotion of community forums and civic initiatives related to maintaining and improving the binational region’s quality of life in a more integrated economic context.

In summer 2006, San Diego Dialogue will convene an advisory committee and develop a business plan for the Center. Grant applications also will be submitted for specific programs.

**Initiate a crossborder program to foster scientific and technology relationships, awareness of research, and commercialization of discoveries**

This program intends to build on other ongoing efforts such as the UCSD-originated CONNECT program to extend professional, private sector, and academic networks into the binational region. It would provide a forum for high technology professionals on both sides of the border to build new relationships, increase the awareness of ongoing research in academia and the private sector, and support the potential commercialization of new technologies that have been developed in the binational region.

Under the auspices of the Crossborder Innovation and Competitiveness Center, San Diego Dialogue anticipates convening a Technology Forum in 2006 to kick off the crossborder program.

**Work with Baja California to establish crossborder clinical research as a precursor to growing a transregional biopharmaceutical industry**

The knowledge, experience, and technical quality required to conduct world-class clinical research represent the foundation upon which a new crossborder cluster can be built. Benefits from pursuing this opportunity include new drug therapies that would become available to help solve shared public health challenges, enhancements to the region’s human capital, as well as attracting new outside investment to the region. Tentative steps have been taken to explore crossborder clinical trails efforts that would lead to a new crossborder cluster. Future activities include creating new education and training programs to clarify trial protocols and other regulatory requirements of agencies such as
the U.S. Food and Drug Administration (FDA) and Mexico’s Secretariat of Health.

San Diego Dialogue will establish a committee of local, binational experts from government, academia, UCSD Extension, and the biopharmaceutical industry to outline a phased approach for developing the necessary research capabilities, the infrastructure, and legitimate parallel studies (approved by both the U.S. FDA and Mexico’s Secretariat of Health) that will lead to the development of a larger crossborder biopharmaceutical industry. A workshop to jump start this committee is planned in Summer 2006.

**LEAD/PARTICIPATING AGENCIES**— UCSD Partnership with Mexico, San Diego Dialogue, CENTRIS, CICESE
HOUSING

This chapter provides background information on the housing issues discussed at the binational workshops, which are listed below. It also includes early action strategies to begin to address them.

- Address infrastructure needs of existing and future residential land use (e.g., water supply, sewage, schools).
- Address housing affordability issues and opportunities.
- Address future housing supply and demand.

EXISTING SETTING

Housing Characteristics

As of 2003, it was estimated that there were 341,908 housing units in the City of Tijuana. Data collected by the City of Tijuana’s Department of Urban Administration (Administración Urbana), show a steady increase in the number of building permits issued for new housing from 2003 to 2005. In 2003, 13,835 building permits were issued, while in 2004, the number of home construction permits issued dropped to 12,957. In 2005, 14,846 permits were issued.\textsuperscript{40} The City of Tijuana’s housing chamber, Cámara Nacional de la Industria de Desarrollo y Promoción de Vivienda, forecasts that in 2006, approximately 17,000 housing units would be constructed in the City of Tijuana. This would represent about a 20 percent increase from the 14,846 units that were permitted in 2005.\textsuperscript{41}

The City of Tijuana holds the distinction of having one of the highest housing growth rates in Mexico, second only to Mexico City.\textsuperscript{42} In fact, this partially explains Tijuana’s 5.55 acres (or 2.25 hectares) daily growth rate.\textsuperscript{43} Most of the developments are being constructed by large housing development groups and are being built on the southern and eastern fringes of the city, where there is still an abundance of available land. Housing forecasts show that the number of housing units would more than double by 2030. In the Mesa de Otay section of the study area, there would be an estimated 62,936 housing units by 2030, which is more than double the 2004 number of 24,153 housing units.

The City of Tijuana’s Urban Development Plan identifies the number of housing units needed for the projected population and their densities. Planners for the City derived the amount of acreage needed for future housing based on the average number of acres used to build homes from 2000 to 2005.

\textsuperscript{40} City of Tijuana’s Department of Urban Administration (Administración Urbana), December 2006.
\textsuperscript{41} El Mexicano Newspaper, Information provided by CANADEVI (Mexico’s National Housing Chamber – Tijuana Branch), December 2005.
\textsuperscript{42} Banamex, Mexican Housing Overview, Page 72, 2005.
\textsuperscript{43} Programa de Desarrollo Urbano del Centro de Población de Tijuana (PDUCPT) B.C., 2005.
The City of Tijuana currently permits 60 units per acre in certain specific planning areas (e.g., Mesa Zona Río). Due to proposals for higher vertical developments, the City is considering raising the density to 75 units per acre in these areas. This is comparable to the residential density permitted in some parts of downtown San Diego.

**Tijuana and San Diego Home Prices**

This section presents data on the production of housing by type and price in Tijuana. The Mexican housing market is divided into six different market segments defined by price and income that are detailed in the Table 16.

<table>
<thead>
<tr>
<th>Homebuyer Segment</th>
<th>Price of Home (U.S. Dollars)</th>
<th>Annual Income Range (U.S. Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>&lt;$8,000</td>
<td>&lt;$3,000</td>
</tr>
<tr>
<td>Social</td>
<td>$8,000 to $20,000</td>
<td>$3,000 to $8,000</td>
</tr>
<tr>
<td>Economic</td>
<td>$20,000 to $38,000</td>
<td>$6,000 to $20,000</td>
</tr>
<tr>
<td>Middle</td>
<td>$38,000 to $100,000</td>
<td>$15,000 to $50,000</td>
</tr>
<tr>
<td>Residential</td>
<td>$100,000 to $200,000</td>
<td>$40,000 to $100,000</td>
</tr>
<tr>
<td>Residential Plus</td>
<td>over $200,000</td>
<td>&gt;$100,000</td>
</tr>
</tbody>
</table>

Source: Banamex, Mexican Housing Overview; page 79, 2005

An example of a typical new home in Tijuana that falls under the category of Economic would be a two-bedroom unit that measures 500 square feet (sq. ft.) on a 968 sq. ft. lot and starts at about $32,000. Homes at this price and less are built for the “social interest,” which includes the Minimum, Social, and Economic segments of the housing market. The monthly payment on such a home, based on a ten percent down payment for a 25-year loan at a 9.5 percent interest rate, is approximately $250.45

A home that measures approximately 1,173 sq. ft. on a 1,205 sq. ft. lot and has three bedrooms with a view located in a gated exclusive neighborhood in Tijuana would run about $139,000. This home would be classified in the Residential segment, comparable to what we identify in the United States as being from the upper middle class. At this price, the monthly payment based on a ten percent down payment for a 20-year loan at an 11.98 percent interest rate, would be about $1,539.46

In San Diego, a four-bedroom home located in a middle class neighborhood that measures approximately 1,860 sq. ft. on a 4,800 sq. ft. lot cost about $607,370. At this price a standard loan with a 6.875 percent interest rate would require a ten percent down payment of $60,737 and a total monthly payment of $4,638. A household would have to earn about $12,000 a month to qualify for this loan amount.

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44 City of Tijuana’s Department of Urban Administration, (Administración Urbana), December, 2006.
46 Chapultepec Décima Sección, Credimexusa and Impulsora Habitacional Mexicana S.A. de C.V., February 2006.
Land values, lot sizes, density, labor and material cost, and supply and demand are examples of the contributing factors to determining home prices. For example, the most commonly used home construction materials used in Tijuana are a combination of cinder block exterior walls, cement foundations, and tiled or shingle roofs. These materials, along with labor cost, are much less expensive in Tijuana than in San Diego. Homes in San Diego are usually made from a combination of wood frame construction, stucco exterior walls, and cement foundations. These materials are more readily available in San Diego and represent a lower assembly cost than for materials used in Tijuana.

Higher residential densities also reduce land cost, which in turn, make homes more affordable. In fact, in the Tijuana portion of the study area, as identified in the Population, Housing, Land Use, and Employment Chapter, residential density is about 30 percent higher than San Diego’s side of the study area. This is perhaps another variable contributing to the lower home prices in Tijuana.

**Tijuana and San Diego Housing Markets**

For some developments, it is estimated that up to 30 percent of homebuyers who purchase first or second homes in Tijuana work or live in the United States, while citywide, the number is five percent. Ninety percent of the coastal properties are purchased by U.S. citizens who primarily purchase them as second homes. Only two percent of the homebuyers on the coast are estimated to commute to work in San Diego.

Unlike the United States, construction loans in Mexico are primarily made for the residential sales market (Appendix C). Consequently, there are not very many rental properties because there are very few banks that loan money to construct rental units. This makes renting a home difficult since only thirteen percent of the housing stock in Mexico is rental units.

Approximately 50 percent of the homes built in Tijuana are targeted to the social interest (interés social) market segment, which are homebuyers seeking a house that is priced at $40,000 or less. Another thirty percent of new homes being built are priced between $40,000 and $70,000, and ten percent are priced between $70,000 and $150,000. The other ten percent of homes built are priced above $150,000.

In stark contrast, the homes available in the top ten percent category in Tijuana have prices that are comparable with the inventory of homes available for the lower economic end of the San Diego home buying market. In March 2006, the median price for a home in San Diego was $607,370. Considering the prices shown above, there is a potential draw for low-wage San Diego home seekers to the Tijuana housing market.

The percentage of households in San Diego that is able to afford a median-priced home stood at nine percent in December 2005, compared with 11 percent for the same period in 2004, according to a report released by the California Association of Realtors® (C.A.R.). This trend is leading to an
increase in long-distance interregional commuting by the region’s employees who seek less expensive housing in Tijuana and surrounding Southern California counties.

**Tijuana and San Diego Housing-Related Infrastructure and Irregular Developments**

The cost for housing-related infrastructure in Tijuana is absorbed both by the city and developers. Developers in Tijuana are responsible for installing basic infrastructure (sewer, streets, and septic tanks). The City of Tijuana also requires developers to dedicate land for public facilities (equipamiento urbano). Some examples of these dedications include land for schools and fire stations. At the same time, the long-term cost for infrastructure maintenance and construction is shouldered by the City of Tijuana and Baja California’s State Commission for Public Works (Comisión Estatal de Servicios Públicos – CESPT).

The City of Tijuana and CESPT’s budgets are further strained by the large number of irregular settlements that are being built. These settlements are similar to what San Diegans would recognize as “squatter camps.” However, the settlements in Tijuana are more diverse in terms of size, permanence, and construction materials used. The settlements can be defined as self-built housing developed by a household, typically with the assistance of extended family, that lacks clear land title, is not formally connected to urban services, and is financed primarily with cash. 52

The initial structures are commonly built with a combination of building materials, which can include recycled wood garage doors imported from California and recycled cardboard. Over time, these structures become more permanent structures of brick and mortar construction.

The magnitude of this housing phenomenon overwhelms Tijuana’s infrastructure. It is estimated that about fifty percent of all new homes built in Mexico each year are of this type. 53 This is consistent with the City of Tijuana’s estimate that fifty percent of Tijuana residents do not have legal title. 54

These irregular settlements rarely have access to basic infrastructure. The City of Tijuana eventually provides municipal services to these irregular settlements. This does not come without cost. Local and state governments have limited budgets and have to pay up to four times more for installing infrastructure such as electricity, drainage, and potable water in settlements like these than they would have otherwise if it was a permitted development. 55 After a period of approximately 15-25 years, these neighborhoods become a normal part of the city. 56 This is unlike the experience of squatter settlements, which are typically located in floodplains and rural, farming communities of San Diego. These settlements rarely become permanent residences and are not provided basic infrastructure.

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52 The State of Mexico’s Housing, (prepared for CIDOC and CONAFOVI by Joint Center for Housing Studies of Harvard University), Page 15, 2004.
53 Banamex, Mexican Housing Overview, Page 50, 2005.
54 La Frontera, “Estima el 50% No Tiene Su Titulo de Propiedad,” January 30, 2006.
55 The State of Mexico’s Housing, (prepared for CIDOC and CONAFOVI by Joint Center for Housing Studies of Harvard University), Page 65, 2004.
56 Banamex, Mexican Housing Overview, Page 64, 2005.
EXISTING PLANS AND PROGRAMS

Land use decisions in the County of San Diego are based on the local jurisdictions’ and County of San Diego’s general and community plans. The RCP builds on local general plans and links transportation and land use planning at a regional scale. Similarly, land use decisions in the City of Tijuana are based on the City’s Urban Development Plan, which is Tijuana’s equivalent to a general plan. This planning process builds on designated specific plans, which function like the County’s community plans and are developed for the City of Tijuana’s specific planning areas.

City of San Diego - Otay Mesa Community Plan

With the update of its Otay Mesa Community Plan, the City of San Diego is evaluating possibilities for more residential and mixed-use developments in this area. This decision-making process is occurring at the same time regional growth forecasts suggest a future deficit in land available for housing and a surplus of employment land in 2030 (see page 52 of Economic Development chapter). The existing Otay Mesa Community Plan allows for approximately 12,400 housing units. The Draft Concept Plan contains several scenarios that propose including up to 19,000 more housing units than the current adopted plan.57

Conversion of industrially zoned land to residential zoning would help to address the regional imbalance of land uses that is being forecasted. At the same time, it will be important to evaluate the impacts of new residential development in this area on the future demand for regional transportation infrastructure and transit services, as well as other regional infrastructure needs.

In addition, the City of San Diego should consider the “smart growth” land use policies and concepts contained in SANDAG’s RCP in determining the appropriate locations and urban design for residential and mixed-use developments, particularly in relation to future regional transit service in the study area. SANDAG staff already has begun working with the City of San Diego on this evaluation.

Brown Field Municipal Airport

As described in the Transportation Chapter, the Brown Field Municipal Airport is located within the City of San Diego’s Otay Mesa Community Planning area.58 Even though it is within the City’s planning area, the San Diego County Regional Airport Authority (Airport Authority) also has certain responsibilities regarding land uses at the airport. In addition, the Airport Authority is responsible for preparing an ALUCP, which deals with land use compatibility around the airport such as noise, overflight, safety, and airspace protection. The Airport Authority currently is updating the San Diego County ALUCP. State law requires that future land use developments be consistent with compatibility criteria found within the ALUCP.

57 City of San Diego Otay Mesa Community Planning Workshop, dated July 19, 2006.
58 San Diego County ALCUP-Public Use Airports Background Data (March 2005 Draft), Page 3.
City of Tijuana

The City of Tijuana’s Specific Plan for East Mesa de Otay (Plan Parcial de la Mesa de Otay Este) was completed in August 2005, and the Partial Program for Conservation and Urban Improvement of the Alamar River Zone (Programa Parcial de Conservación y Mejoramiento Urbano para la Zona del Arroyo Alamar) is expected to be completed by January 2007. The preparation of these plans is a joint effort between federal, state, and municipal governmental entities. These plans, together with the City’s Urban Development Program 2002 – 2025, serve to regulate housing development and general land use in the City of Tijuana and the corresponding Plans’ specific planning areas. The Specific Plan for East Mesa de Otay estimates there will be a total of 62,936 housing units by the year 2030.

City of Tijuana’s International Airport

Tijuana’s International Airport is managed by Grupo Aeroportuario del Pacífico (Pacific Airport Group). The SCT is the Mexican government agency that oversees the operations of this government owned facility. The SCT controls land use in and around the airport that impact its safety and operation.

County of San Diego

The East Otay Mesa Specific Plan was adopted December 17, 1994, and amended February 2, 2005. It sets out a comprehensive plan for the development of approximately 3,300 acres. Anticipated uses are business and industrial. The Specific Plan does not propose housing within its boundaries. Certain steep slope and biologically sensitive resources have been identified in areas that are zoned Rural Residential and Mixed Industrial and Commercial. These areas are subject to the Sensitive Resource Area Regulations of the zoning Ordinance.

City of Chula Vista

Chula Vista’s General Plan Update and related amendments to the Otay Ranch General Development Plan were adopted on December 13, 2005. Through these actions several changes were made to the land use and circulation network within the remaining Otay Ranch project area west of the Otay Reservoirs and south of Olympic Parkway. As further described below, these changes collectively added approximately 7,000 units of housing capacity mostly at multi-family densities, introduced a new town center concept for the prior Villages 2, 4, 8, and 9 areas, expanded employment areas, introduced a new town center roadway classification, realigned and redesigned future Rock Mountain Road and Otay Valley Road, and extended the transit network consistent with SANDAG’s Regional Transit Vision (RTV).

Village 2 (Village of Montecito) is planned as a pedestrian- and transit-oriented village with a larger and more intense core with frontage on La Media Road that will serve nearby communities, as well as Village 2 residents. Some 1,800 of the planned 2,500 units will be in multi-family or mixed-use areas at a density of 18-dwelling units per gross acre. The expanded transit network includes a bus rapid transit route on La Media Road with a station in Village 2. Village 2 contains a high school and other institutional uses, and will have approximately 12 acres devoted to commercial uses.

59 City of Chula Vista’s Otay Ranch General Development Plan, 2005.
To the south in the prior Village 4 and 8 areas, a new pedestrian-oriented, mixed-use town center is proposed around the intersection of La Media Road and Rock Mountain Road. Of the approximately 1,800 total units, 1,000 units are in the town center in mixed-use and multi-family settings at densities of 18 dwelling units per gross acre. The town center is bisected by La Media Road and Rock Mountain Road, which are designated as town center arterials intended to use a couplet design that will better accommodate pedestrians and the extended BRT network with a station in the town center.

Just to the east of this new town center and west of future SR 125 is a proposed Regional Technology Park (RTP) of approximately 125 to 200 acres that would accommodate research and high-tech manufacturing activities providing high-quality jobs and taking advantage of proximity to the university site to the east.

A new town center (Village 9) is located to the east of the RTP across SR 125 and adjacent to the planned university campus. It is also intended as a pedestrian-oriented, mixed-use area with higher residential densities strongly tied to the university and providing housing, retail, and other commercial and related services necessary to support the university. Its approximately 2,500 residential units are mostly attached and multi-family products with densities from 18 to 30 dwelling units per gross acre. In conjunction with future university land dedications, it is possible that another 800 units could be allowed. The South Bay BRT network includes a transit station at this location, along with a link to the route connecting Otay Ranch to Downtown San Diego and other activity centers to the north and south.

The planned 240-acre Eastern Urban Center is located to the north of the Village 9 town center and university and is bounded on the west by SR 125. As the most intensely developed hub, this mixed-use urban center will serve eastern Chula Vista and South San Diego County, integrating high-density housing, low- and mid- to high-rise office uses, and community- and regional-serving commercial and entertainment uses. It is envisioned as a unique and symbolic focal point for Otay Ranch and the broader subregion. Over 3,300 dwelling units are proposed at a density of over 40 dwelling units per gross acre. Building height can be up to 15 stories, and major office, retail, and cultural uses are ultimately envisioned. It will also be served by the expanded BRT system, serving a hub for three routes, including the primary transit connection to Otay Mesa and the international border.

**EARLY ACTION STRATEGIES**

**ISSUE**— Address future housing supply and demand, housing affordability issues and opportunities, and infrastructure needs of existing and future residential land use.

**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.
The City of San Diego is in the process of updating the Otay Mesa Community Plan. In addition to the No Project Alternative, three draft scenarios include plans for a significant increase in housing. Conversely, each of the scenarios would require the rezoning of industrial land to accommodate additional housing.

The collaboration would entail analyzing the issues related to proposed changes in land use (e.g., industrial to residential), transportation infrastructure, and regional housing supply. In the context of the Otay Mesa Community Plan update, opportunities should be explored in order to address the need for additional land for housing while considering competing demands for vacant land.

**LEAD/PARTICIPATING AGENCIES**— City of San Diego, SANDAG

**EARLY 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

This will require the Identification of areas suitable for the implementation of a comprehensive (urban) development. Some characteristics that will help the implementation of this development would be:

- Lawful ownership of land;
- Closeness to jobs;
- Infrastructure that is in good condition;
- Areas for commercial and service activities; and
- Roads that are in good condition.

**LEAD/PARTICIPATING AGENCIES**— IMPlan, SANDAG
ENVIRONMENTAL CONSERVATION

INTRODUCTION

This chapter provides background information on the environmental issues discussed at the binational workshops, which are listed below. It also includes early action strategies to begin to address them.

- Address conservation of urban river corridors (e.g., Alamar River and Otay River Watershed)
- Address surface water quality
- Address conservation of sensitive habitat corridors
- Address air quality

EXISTING SETTING

Biological Resources

This section presents data on the biological resources within the study area, which include vegetation communities, species (including high-priority plants and animals), and habitat types (including quality of habitat).

The Otay Mesa-Mesa de Otay study area represents only a portion of the proposed open space binational habitat conservation corridor proposed by the Las Californias Binational Conservation Initiative and is part of one of the most threatened and biologically unique areas in the world. In fact, Conservation International has designated it as one of the world’s 25 biodiversity hot spots, with more than 400 species listed as endangered, threatened, or otherwise sensitive to human impacts. The hot spot section of the study area can generally be described as the “San Ysidro Unit,” which includes the Otay Mountain Wilderness area and proposed adjacent open space areas on the Mexican side. The San Ysidro Unit includes Otay Mountain, San Miguel Mountain, Cerro San Isidro, Jesus Maria Mesa, and Tecate Peak which are located near the study area. This area can further be characterized as two main phytogeographic regions within the study area, which are identified by their climate, topography, and species composition.

Coniferous Forest

One of the phytogeographic regions is the Coniferous Forest zone, which is recognized by the presence of Tecate Cypress Forest and the unique species with which it is associated. Tecate cypress groves on Otay Mountain, Tecate Peak, and Guatay Mountain in San Diego County represent the

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60 Conservation Biology Institute, Las Californias Binational Conservation Initiative, Page 8, September 2004.
northern limit of an extensive distribution of this species that extends south 100 miles (160 km) into northern Baja California (Minnich).\

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The unique species associated with the Tecate cypress represent the unique biodiversity value of these areas. The Thorne’s hairstreak butterfly (Mitoura thornei) is an endemic species here, whose larvae are obligate to Tecate cypress.62 A list of the other plant and animal species can be found in Appendix B – the Tecate Cypress Forest table.

**Californian**

The second phytogeographic region is called the Californian, and the two most dominant groups of plant species located there are the California Coastal Sage (CSS) and Chaparral. The type of CSS that is dominant in the border region is referred to as the Martiran succulent scrub, a subspecies of CSS. The CSS and Chaparral are subsets of the Californian and are described below.

**California Coastal Sage**

One of the most well known endangered inhabitants of the Martiran succulent scrub is the Quino checkerspot butterfly. The habitat for Quino checkerspot butterflies can be defined in simple terms — extensive collections of patches of primary larval host plants, Plantago erecta, distributed in grassland — and coastal sage scrub-dominated open space.63 This habitat is present on both sides of the border. Adjacent to the study area, Jesus Maria Mesa, is on the southwest flank of Cerro San Isidro. It supports vernal pools and a population of Quino checkerspot butterfly that uses habitat on both sides of the border and is likely important to recovery of the species (USFWS 2000).64 A list of some of the other plant and animal species that can be found in this habitat are included in Appendix B – the Californian table.

**Chaparral**

Chaparral is a vegetation community generally composed of hard-stemmed, leathery-leaved shrubs.65 It is present on both sides of the border and hosts a variety of plant and animal species. Some of the species found there are included in Appendix B – the Chaparral table.

On the U.S. side, most of the San Ysidro unit is protected by the City of San Diego and County parks, the Otay Valley Regional Park, Bureau of Land Management (BLM), California Department of Forestry, Environmental Trust, and open space located on the County Detention Facility.66 The Mexican side of the study area has no official land management agency.

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62 Las Californias Binational Conservation Initiative, Page 23.
63 A Management and Monitoring Plan for Quino Checkerspot Butterfly (Euphydryas editha quino) and its Habitats in San Diego County, Page 7.
64 Las Californias Binational Conservation Initiative, Page 24.
66 Multiple Species Conservation Program (MSCP) - South County Segment, Page 3-3.
Watersheds

Within the Californian phytogeographic region are two watersheds: the Otay River Watershed and Tijuana River Watershed (Figure 17). They both support distinct plant and animal species.

Otay River Watershed

The predominant land uses in the Otay River Watershed are open space (67 percent) and urban/residential (20 percent). The major inland hydrologic features, the upper and lower Otay Lakes, are two water supply reservoirs that also provide important habitat and recreational opportunities. Other important conservation areas within the watershed include the San Diego National Wildlife Refuge, the Rancho Jamul Ecological Reserve, and the vernal pool lands in the region.

The Otay River Valley Regional Park is located within the Otay River Watershed and includes approximately 8,500 acres stretching from the San Diego Bay 11 miles up the Otay River Valley. The Otay River Valley runs between the southern boundary of the City of Chula Vista and the northern boundary of South San Diego (Otay Mesa/Nestor). In 1990, the Cities of Chula Vista and San Diego and the County of San Diego entered into a Joint Exercise of Powers Agreement (JEPA) to coordinate the creation of this multi-jurisdictional park. This park contains a mix of recreation opportunities ranging from playing fields and picnic areas to hiking, biking, and horse trails,
environmentally sensitive areas, wildlife, culture, historic, agriculture, archaeological, and scenic resources.

The northwestern and northeastern portions of the East Otay Mesa Specific Plan Subarea 1 are designated Conservation/Limited-Use Areas. This designation allows for uses such as outdoor participant sports, campgrounds, and resorts. This area, as well as Subarea 2 and the rest of the Otay Plan Area, include vernal pools, endangered plants, and golden eagle habitats.

Some of the native plant and animal species that can be found in the Otay River Watershed habitat are included in Appendix B - the Otay River Watershed table.

**Tijuana River Watershed**

The Alamar River, also known as the Arroyo Alamar, is located in the southern portion of the study area and is a major river in the Tijuana River Watershed. It is situated in the Tijuana River Watershed with the Tijuana River downstream and the Tecate River upstream. The water that flows through this river eventually makes its way into the United States via the Tijuana River. This river is unlike the Tijuana River in that it has not been channelized, therefore, it is able to serve as an important riparian habitat. It also provides a continuous riparian corridor link from the study area east to Tecate. The Alamar River is one of the few relatively undisturbed riparian corridors in the San Diego-Tijuana region.

There are three distinct riparian segments of the Alamar River Corridor. Only two of these zones are fully located within the study area, while the eastern portion of the study area partially covers Zone 3. Zone 1, the urbanized section, begins at the end of the channelized Tijuana River, directly south of Mesa de Otay, and extends to the bridge on Boulevard Manuel J. Clouthier. Riparian habitat in this zone is disturbed by irregular settlements, sand mining, commercial activities, and unauthorized dumping of solid waste.

Zone 2, identified as the “Transition Section,” begins at Boulevard Manuel J. Clouthier and extends eastward to Boulevard Otay-Matamoros. Agriculture and sand mining are conducted in this zone. This zone also is disturbed by encroaching urban settlements.

The portion of the study area that covers the western section of Zone 3 begins at Boulevard Otay-Matamoros and extends beyond the study area to the bridge located near the Tecate-Tijuana Toll Road. This is a sparsely populated area where cattle ranching, agriculture, and brick making are the main economic activity. The riparian habitat and water quality in this area is considered to be in pristine condition.

Most of the Alamar River riparian corridor serves as prime habitat for many native plant and animal species. Some of the native plant and animal species that can be found in this habitat are included in Appendix B - the Alamar River Watershed. In addition, the Alamar River needs to be protected because it serves as an important source for replenishing the City of Tijuana’s underground aquifer.

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67 County of San Diego, East Otay Specific Plan Amendment, Page 30.
69 The Alamar River Corridor: An Urban River Park Oasis in Tijuana, Baja California, Mexico, Page 9.
The City of Tijuana imports 96 percent of its potable water, with the potential of drawing 10 to 15 percent of its potable water from an aquifer recharged by this river and the Tijuana River.\(^{70}\)

Although several bands of pristine riparian habitat still exist along the Alamar River, encroaching development and pollution threaten the river’s well being. There are several key factors that threaten this river. The most serious of these threats come from point and non-point sources of pollution, sand mining, and potential channelization.

- **Point sources of pollution** come from raw sewage draining from a pipe directly into the river. Currently, the river receives renegade sewage flows upstream from Tecate and downstream from the Mesa de Otay area.

- **Non-point pollution sources** may include soil erosion from farm land and construction sites, rural and urban pesticide and fertilizer runoff, failing septic systems, animal waste, motor oil, and antifreeze. The threat of contaminating groundwater is already present by these sources. If this continues to go unchecked, groundwater could be overly polluted and unfit to use as drinking water.

- **Sand mining** threatens habitat and percolation of the river bed. In areas where sand mining occurs, the native vegetation is often removed, and the natural sand bottom of the river is disturbed. The native vegetation and sand bottoms not only help absorb water into the aquifer, but slow and dissipate the volume of water that enters the Tijuana River during a flood event.\(^{71}\)

- **Channelization** generally serves to control flood waters from leaving the river banks. However, where the channelization ends, larger quantities of water are discharged at a higher rate and consequently, disproportionately inundate areas at its outfall more than it would if the channel was not in place. Some of the other destructive consequences that are associated with river channelization are the following: decreased wildlife habitat and biodiversity; decreased groundwater infiltration; decreased stream base flows; decreased surface and groundwater storage; increased storm water runoff and volume; increased storm water peak discharge rate; increased channel erosion; increased frequency of local flooding; and increased pollutant concentrations and quantities in storm water.\(^{72}\)

The concept of “Sustainable River Architecture” is being supported for the Alamar River. Essentially this concept supports the managed development of riparian corridors that do not rely on channelizing river basins. This type of managed development is still possible for the Alamar River since most of it has not yet been channelized.

**Water Quality**

As described in the biological resources section of this chapter, the Otay River Watershed and the Tijuana River Watershed are the most important water resources in the study area. Water quality is an extremely important environmental resource issue since the study area is located in a semi-arid region and over 90 percent of its consumption depends on imported water. Furthermore, point and non-point sources of pollution remain a continual threat to local groundwater and above-water supplies, as well as the Tijuana River Estuary and local beaches. Ultimately, comprehensive watershed management plans will play a major role in addressing these issues in the future.

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\(^{70}\) The Alamar River Corridor: An Urban River Park Oasis in Tijuana, Baja California, Mexico, Page 10.

\(^{71}\) The Alamar River Corridor: An Urban River Park Oasis in Tijuana, Baja California, Mexico, Page 38.

\(^{72}\) The Alamar River Corridor: An Urban River Park Oasis in Tijuana, Baja California, Mexico, Pages 33 - 34.
Air Quality

The two regions not only share habitat corridors and watersheds, but also share similar air quality issues. Air pollutants in the San Diego-Tijuana area derive from a variety of sources. Stationary sources include power plants, as well as manufacturing and industrial facilities that emit air pollutants. Mobile sources are sources of air pollution such as automobiles, trucks, off-road vehicles, boats, and airplanes. These sources generate particulate matter, carbon monoxide, ozone, and other toxic air pollutants.

In California, there are 15 air basins, which are land areas with generally similar meteorological and geographic conditions throughout. The San Diego Air Basin encompasses the entire county of San Diego. In Baja California, there are no official designations for air basins.

In general, air quality in the San Diego region has improved dramatically over the past two decades, but continued efforts are needed to sustain this positive trend and ensure clean air.

EXISTING PLANS AND PROGRAMS

This section focuses on the several existing conservation plans and studies on both sides of the border.

Multiple Species Conservation Program (MSCP)

The MSCP is a comprehensive, long-term conservation plan for southwestern San Diego County. Through the MSCP, high-priority habitat areas are designated and protected, while urban development is allowed for less sensitive areas. The boundaries extend to the U.S.-Mexico border and cover mostly the eastern portion of the study area. The City of Chula Vista and the County of San Diego prepared MSCP subarea plans.

Las Californias Binational Conservation Initiative

The Las Californias Binational Conservation Initiative (LCBCI) – prepared for the San Diego Foundation, Resources Legacy Fund Foundation, and the International Community Foundation – is a vision document created by the need for a shared conservation vision for San Diego/Tijuana/Tecate border region. Many species in this region are endangered or threatened. Natural resources and the environmental services they support, such as water quality and water supply protection, flood control, and scenic and recreational resources, function across large landscapes, which are increasingly threatened by expanding human land uses.73

As populations continue to grow on both sides of the border, urbanized areas continue to encroach on sensitive habitat areas. Many of these habitat areas are interconnected wildlife corridors that permit animals to freely circulate between both countries. This delicate ecosystem is under threat of being lost forever unless more steps are taken to control the tide of development. Among other binational conservation proposals, the LCBI’s goal is to protect binational conservation corridors, which includes open space areas between the Tijuana-Tecate corridor, Sweetwater and Otay River

73 Las Californias Binational Conservation Initiative, Page 1.
watersheds in California, and the Rio Guadalupe watershed in Baja California (Figure 18). The LCBI boundaries include and extend beyond the Otay River and Tijuana River Watershed.

**Figure 18**

Binational Watersheds

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**Otay River Watershed Management Plan**

The Otay River Watershed Management Plan (ORWMP) encompasses approximately 160 square miles in southwest San Diego County. The ORWMP is one of the three hydrologic units that discharge to the San Diego Bay. The watershed management plan area encompasses several jurisdictions, including the unincorporated area and portions of the cities of Chula Vista, Imperial Beach, Coronado, National City, and San Diego. The ORWMP involves characterizing the Otay River watershed's various resources and land uses; identifying goals and objectives; assessing and prioritizing threats to existing beneficial uses and natural resources; and identifying implementation strategies for the protection, enhancement, and restoration of beneficial uses and natural resources, including a water quality monitoring program to monitor, maintain, and enhance water quality.

In 2004, the County of San Diego and Cities of Chula Vista, Imperial Beach, and San Diego, and the Unified Port of San Diego entered into a JEPA to develop and adopt the final draft ORWMP. The final draft ORWMP was adopted by the San Diego County Board of Supervisors on May 10, 2006.

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74 Las Californias Binational Conservation Initiative, Page 1.
The City of Imperial Beach City Council adopted the Plan on May 17, 2006, and the Port of San Diego adopted this plan on June 6, 2006. Other hearings will be scheduled in the future by the City of Chula Vista and the City of San Diego.\textsuperscript{76}

**A Binational Vision for the Tijuana River Watershed**

“A Binational Vision for the Tijuana River Watershed“ is a template for a binational watershed management plan which was developed by the Binational Watershed Advisory Council (BWAC), that is made up of 155 Tijuana River Watershed stakeholders. It contains baseline data and trends for the major areas of concern identified by stakeholders: water, air, ecosystems and natural resources, waste, and socioeconomic issues.\textsuperscript{77} It also has a list of action plans which identify ways to protect the watershed.

The Tijuana River Watershed vision document proposes to develop a watershed management mechanism that cuts across several local, state, and international boundaries. The Tijuana River Watershed (TRW) lies across the U.S.-Mexican international boundary and is approximately 1,750 square miles (4,465 square kilometers) in area, with one-third in California and two thirds in Baja California (Figure 16). It extends from the Laguna Mountains in the northeast, the Sierra Juarez Mountains in the south, and to the Pacific Ocean in the West.\textsuperscript{78}

As development continues to encroach on the watershed, many threats accompany it. Some of the most pressing environmental and cultural issues identified in the watershed include rapid population growth, uncontrolled urbanization, increased demand for water, flood control, poor water quality, and the loss of important animal and plant species and habitats.\textsuperscript{79}

The rapid population growth degrades habitat, which in turn affects animal and plant species. It also promotes housing and industrial development that stretches already overburdened sewer infrastructure very thin. As described in the Housing chapter of this report, the lack of sewage infrastructure in the sprawling irregular settlements and in some new and older housing tracts located in Tijuana bring with it renegade sewer flows that pollute ground water, streams, estuaries, and beaches downstream, as well as destroying plant and species habitat.

The many toxins and bacteria these waste streams carry jeopardize the public’s health. An example of this threat is evident by the many beach closures attributable to this contamination. In addition, soil erosion caused by this type of development further contributes to the polluted sedimentation of the Tijuana River Estuary. This pollution threatens the survival of the estuary and all living things in it.

\textsuperscript{76} MSCP, Web page address: http://dplu-mscp.sdcounty.ca.gov//pub_out/draftwmp.htm.

\textsuperscript{77} A Binational Vision for the Tijuana River Watershed, Page 3.

\textsuperscript{78} A Binational Vision for the Tijuana River Watershed, Page 3.

\textsuperscript{79} A Binational Vision for the Tijuana River Watershed, Page 13.
“A Binational Vision for the Tijuana River Watershed” proposes several actions that address the many threats facing the Watershed. In order to give the Watershed long-term protection, these actions will need to be implemented through a binational watershed management plan framework. This ambitious proposal presents several challenges and opportunities. Most of the challenges lie in the fact that the institutional mechanisms that govern watersheds are very different.

This is apparent when looking at the United States’ and Mexico’s institutional approaches to managing watersheds. In Mexico watershed management is more focused on water supply in the riparian corridor and aquifers, whereas in the United States, vegetation, habitat, and species also are accounted for and considered throughout a watershed.

Despite some fundamental differences in each country’s approach to watershed management, there are opportunities for collaboration. By developing a binational watershed plan, the two regions can better plan together for the benefit of future generations. They also can mitigate potentially future harmful effects that could threaten the shared region’s natural environment, cultural resources, quality of life, and the health of their residents.

**San Diego/Tijuana Clean Diesel Demonstration Projects**

**Background**

As illustrated in the Transportation chapter, crossborder truck traffic has increased substantially as a result of continued growth in U.S.-Mexico trade. Cost-effective emission control retrofit technologies are increasingly being used in the United States to substantially reduce diesel exhaust emissions. However, these technologies are not currently used by the Mexican trucking industry, resulting in excess emissions in San Diego County. The following section focuses on programs to address emissions generated by crossborder truck traffic.

**Current Demonstration Project**

To begin to address air quality concerns in the border region, in 2004, the San Diego County Air Pollution Control District (APCD) applied for and received a grant from the U.S. Environmental Protection Agency (EPA) to: draw together U.S. and Mexican stakeholders; evaluate the nature of crossborder truck fleets; and identify retrofit technologies that could be used to reduce diesel exhaust emissions from Mexico-based trucking operations in the San Diego-Tijuana border region.

Following up on this effort, in 2005, the APCD applied for and received another grant from the U.S. EPA to fund the San Diego/Tijuana Clean Diesel Demonstration Project, with the objective of mitigating the air quality impact of increased crossborder, heavy-duty diesel truck traffic. This innovative binational project involves identifying and retrofitting up to 50 Mexican-based, heavy-duty diesel trucks operating in the San Diego County/Tijuana border region with emission control devices to demonstrate their viability under Mexican operating conditions and encourage implementation of similar cleaner diesel projects.

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80 Information provided by San Diego County Air Pollution Control District, April 2006.
The devices, diesel oxidation catalysts (DOCs), reduce diesel particulate emissions by 25 percent and hydrocarbons and carbon monoxide by 40 to 50 percent. Diesel particulate emissions are a potent, cancer-causing toxic air contaminant, and hydrocarbons form ozone (smog). Carbon monoxide, at high levels, reduces the oxygen-carrying capacity of blood.

As of April 2006, 20 heavy-duty, diesel trucks have been retrofitted with DOCs, and installation of five more DOCs is pending. The 25 participating trucks range from model years 1988 to 2000 and are classified as either heavy, heavy-duty, or medium heavy-duty diesel vehicles. Additional trucks are anticipated to be retrofitted in the next several months.

Four Tijuana-based crossborder trucking companies are currently participating in the program: Transportes R y F, Transportes Camacho, Montana Express, and Sisipo Transports. Each provides short-haul, crossborder freight transportation within the San Diego/Tijuana region, transporting raw materials (such as metals, woods, and plastic), finished goods (such as furniture and electronics), and canned food and produce across the border. In addition to short-haul transportation, one of the participating companies, Transportes Camacho, also operates long-haul, diesel trucks to transport freight to the other states, including Washington and Texas.

**Potential for Future Demonstration Projects**

**Clean Freight Strategies**

U.S. EPA and APCD are considering implementing a second transborder demonstration project to capitalize on the relationships APCD has established with border stakeholders to improve air quality. Specifically, U.S. EPA is interested in demonstrating “clean freight” strategies on transborder commercial heavy-duty diesel trucks in the San Diego-Baja California region. Clean freight measures are designed to improve fuel economy and lower emissions through idle reduction, improved aerodynamics, advanced (low-viscosity) lubricants, and single, wide-base tires.

Clean freight strategies are promoted by the U.S. EPA through its voluntary SmartWay Transport Partnership, which includes dozens of domestic freight carriers throughout the nation. By demonstrating that clean freight technologies result in fuel savings and emissions reductions, there may be greater incentive by the private sector to invest in these technologies, ultimately leading to greater deployment and reduced fuel consumption and emissions. This would be the first-ever participation in the Partnership by transborder commercial vehicles domiciled in Baja California.

**Diesel Particulate Filters**

Another retrofit technology that could be evaluated is the installation of diesel particulate filters (DPFs). However, several challenges must be addressed to ensure success of a DPF demonstration.

First, DPFs require higher exhaust temperatures, which are rarely achieved during low travel speeds that currently dominate trucking activity at the border. In addition, DPFs also require ultra-low sulfur diesel (ULSD) fuel to operate properly. ULSD will not become widely available in California until September 1, 2006. It has been announced that ULSD will become available in northern Baja California in 2007.
Finally, maintenance issues may also pose a challenge for implementation of a DPF demonstration program. Unlike DOCs, DPFs are not maintenance free. To avoid backpressure problems due to excessive ash build-up, semi-annual or annual filter cleaning is required. Because of limited resources and the small nature of trucking firms operating in the border region, DPF maintenance could represent an issue. There are also challenges concerning the effectiveness of the DPFs dependent on the age of engines equipped. Engines built before U.S. and Mexico’s 1994 Particulate Matter (PM) emission standards—which represent a majority of the engines in today’s Mexico-registered diesel truck fleet—exhibit excessive PM emissions for DPF applications.

However, a future program involving DPFs could still be explored when the circumstances discussed above are more favorable.

**EARLY ACTION STRATEGIES**

**ISSUE**— Address conservation of sensitive habitat and urban river corridors (e.g., Alamar River and Otay River Watershed) and water quality

**EARLY ACTION**— Analyze San Diego County’s MSCP, “A Binational Vision for the Tijuana River Watershed,” and the “Las Californias Binational Conservation Initiative” to develop a framework for a binational approach for habitat corridor conservation and watershed management for the Tijuana River Watershed

As mentioned in the Biological Resources section, the above-mentioned planning documents are an important step in binational watershed and habitat conservation corridor planning. Further analysis and discussion of these documents should occur among the key stakeholders listed below, with the goal of developing an overall framework for preparing and implementing a comprehensive binational watershed management plan for the Tijuana River Watershed. The analysis should address the specific objectives of this planning process, as well as institutional mechanisms and resources necessary to prepare it.

**LEAD/PARTICIPATING AGENCIES**— Border Liaison Mechanism’s Environment and Natural Resources Committee – Tijuana River Basin Working Group (Lead); SANDAG, IMPlan, U.S. and Mexican federal, state, and local agencies/organizations.

**EARLY ACTION**— Expand the environmental analysis of the draft Partial Program for Conservation and Urban Improvement of the Alamar River Zone to further assess the habitat conditions in the Alamar River area

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

Both of these early actions are being developed by IMPlan and would require implementation assistance by the following agencies: Mexico’s National Water Commission (CONAGUA), Federal Investigating Agency for Environmental Conservation.
Protection (Procuraduría Federal de Protección al Ambiente or PROFEPA), Baja California’s Secretariat of Environmental Protection (Secretaría de Protección al Ambiente de Baja California). These efforts should be evaluated in conjunction with the analysis of a comprehensive Tijuana River Watershed Plan as outlined above.

**LEAD/PARTICIPATING AGENCIES**— IMPlan, SIDUE

**ISSUE**— Address conservation of sensitive habitat corridors

**EARLY ACTION**— Explore the feasibility of a binational land use/open space conservation study for SR 11, the future East Otay Mesa-Otay II POE, and proposed connection from the POE to the Tijuana-Tecate Toll Road (Route 2D), including consideration of binational environmental mitigation strategies

As part of this feasibility analysis, the area of study will be defined. This study area may include areas of influence outside the current binational corridor study area that would help maintain north-south habitat connectivity. The study area would be evaluated for potential mitigation or as conservation zones in the context of the future East Otay Mesa-Otay II POE and connecting roads.

**LEAD/PARTICIPATING AGENCIES**— Caltrans, SANDAG, County of San Diego, California Department of Fish and Game, U.S. Fish and Wildlife Service, Bureau of Land Management, IMPlan, and U.S. and Mexican federal, state, and local agencies/organizations

**EARLY ACTION**— Explore possibilities for cooperative agreements between private, public, and community sectors, to build partnerships and private agreements to incorporate the payment for environmental mitigation, purchase of development rights, permits or quota rights, and other similar uses

Conduct a general analysis (conceptual) of the applicable incentives and the mechanism for its implementation. Direct incentives in money or in kind, through taxes directed to conservation, or through other mechanisms that permit the incorporation of cost and project generated impacts. The application of incentives can be improved if they are tied to mechanisms, like the creation of environmental easements.

**LEAD/PARTICIPATING AGENCIES**— IMPlan

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81 The U.S. Fish and Wildlife Service has submitted a letter of support and would like to be involved in this joint effort.
**EARLY ACTION**— Use existing legal mechanisms to acquire private or public land for conservation.

Recommend administrative and economic mechanisms that support the creation and conservation of these areas. Explore legal mechanisms on both sides of the border to transfer subsidies for environmental protection, purchase of development rights, and assignment of quota rights. Promote creation of environmental easements and the agreements to allow private contracts for conservation.

**LEAD/PARTICIPATING AGENCIES**— IMPlan

**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’s crossborder clean air demonstration projects

**LEAD/PARTICIPATING AGENCIES**— San Diego County APCD (Lead), SANDAG

**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

Estimate potential emissions from motor vehicles to assess mitigation of hydro-carbon emissions in conservation areas (i.e., reforestation projects).

**LEAD/PARTICIPATING AGENCIES**— IMPlan
Otay Mesa-Mesa de Otay
Binational Corridor Strategic Plan
Final Results

Plan Estratégico del Corredor
Binacional Otay Mesa-Mesa de Otay

Interactive Polling Results

National City - October 3, 2005
Tijuana - October 11, 2005
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.
Process Overview

Interactive polling technology was used to help the meeting participants prioritize critical issues that are important to address in the Otay Mesa - Mesa de Otay Binational Corridor Strategic Plan. Each participant was provided with a remote FM radio input terminal to respond to questions generated by computer and projected on a large screen. The technology provided the ability to quickly prioritize the issues. The results were tabulated and immediately presented back to the group for discussion. Demographic information was collected to assess the different perspectives of the participants based on where they lived, and what organization they represented.

The participants prioritized the importance of strategic issues in the following categories:

- Transportation Improvements
- Transportation Funding Alternatives
- Economic Development
- Housing
- Environment

The list of strategic issues for each of the categories is presented in Appendix A. A forced-pair prioritization technique was used where two of the critical issues were presented to the group and each participant selected which was most important. After evaluating every possible pair, the relative importance of the issues was calculated on a scale from 0 to 100 and immediately presented to the group for discussion.

This report presents the results of the interactive surveys. The observations and conclusions from the discussion were recorded and will be reported separately. It is important to note that the interactive polling process was designed to stimulate discussion and understanding of the perspectives of the various participants. It was not designed to be statistically representative of a broader group of participants. The number of participants may vary among polls since all participants may not have participated in every poll.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.
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### Transportation Priorities*

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| Mejoras al transporte público transfronterizo y regional | * Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.

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*Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan*

*Plan Estratégico del Corredor Binacional Otay Mesa-Mesa de Otay*

*Interactive Polling Results – October 3, 2005 and October 11, 2005*
Relative Preference of Transportation Funding Sources

Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participant on 10/3/05 except for Additional TransNet Sales Tax which was evaluated in the 10/3/05 meeting only

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(Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participate on 10/3/05)

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<td>29.4</td>
<td>25.0</td>
<td>39.3</td>
<td>40.4</td>
<td>15.1</td>
<td>0.0</td>
<td>75.0</td>
<td>8.3</td>
</tr>
<tr>
<td>Impuesto adicional a la gasolina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.

** Additional TransNet Sales Tax results are for the 10/3/05 meeting only. This revenue source was not evaluated at the 10/11/05 meeting.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.
## Economic Development Priorities*

(Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participate on 10/3/05)

<table>
<thead>
<tr>
<th>Priority</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov't</th>
<th>State Gov't</th>
<th>Fed Gov't</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D-Address infrastructure needs of existing and future industrial land uses (water, energy, etc.)</strong></td>
<td>73.9</td>
<td>74.4</td>
<td>73.5</td>
<td>68.4</td>
<td>73.1</td>
<td>78.2</td>
<td>61.6</td>
<td>76.0</td>
<td>78.5</td>
<td>0.0</td>
<td>88.7</td>
<td>83.2</td>
</tr>
<tr>
<td><strong>A-Promote creation or expansion of common clusters on both sides of the border</strong></td>
<td>52.4</td>
<td>56.4</td>
<td>49.2</td>
<td>46.2</td>
<td>57.5</td>
<td>48.6</td>
<td>33.1</td>
<td>58.2</td>
<td>69.5</td>
<td>0.0</td>
<td>44.0</td>
<td>60.7</td>
</tr>
<tr>
<td><strong>B-Address future industrial land supply and demand</strong></td>
<td>40.7</td>
<td>44.7</td>
<td>37.5</td>
<td>44.1</td>
<td>37.1</td>
<td>33.1</td>
<td>42.6</td>
<td>48.9</td>
<td>39.0</td>
<td>0.0</td>
<td>55.3</td>
<td>27.5</td>
</tr>
<tr>
<td><strong>C-Address relationship between Brown Field Municipal Airport and Tijuana's International Airport operations and existing and future industrial land use</strong></td>
<td>28.8</td>
<td>20.2</td>
<td>35.6</td>
<td>35.2</td>
<td>24.8</td>
<td>35.1</td>
<td>61.7</td>
<td>15.8</td>
<td>12.0</td>
<td>0.0</td>
<td>11.0</td>
<td>22.0</td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.
## Housing Priorities*

(Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participate on 10/3/05)

<table>
<thead>
<tr>
<th>Number of Responses</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
</table>

| D - Address infrastructure needs of existing and future residential land use (water, sewage, schools, etc.) | | | | | | | | | | | |
|------------------------------------------------------------|--------|-----|-----|-------------|-------------|----------|-----|----------|----------|------------|---------|-------|
| Tratar las necesidades de infraestructura de usos de suelo residencial existente y futuro (agua, drenaje, escuelas, etc.) | 78.0 | 81.9 | 74.7 | 74.5 | 82.0 | 82.1 | 61.6 | 80.7 | 72.5 | 0.0 | 88.7 | 77.5 |

| B - Address housing affordability issues and opportunities | | | | | | | | | | |
|------------------------------------------------------------|--------|-----|-----|-------------|-------------|----------|-----|----------|----------|------------|---------|-------|
| Asuntos y oportunidades de vivienda a costos accesibles Item | 52.0 | 50.9 | 52.9 | 51.1 | 53.0 | 51.7 | 42.6 | 45.7 | 69.3 | 0.0 | 66.3 | 60.8 |

| A - Address future housing supply and demand | | | | | | | | | |
|---------------------------------------------|--------|-----|-----|-------------|-------------|----------|-----|----------|----------|------------|---------|-------|
| Tratar la oferta y demanda futura de vivienda | 48.2 | 44.1 | 51.7 | 42.2 | 46.2 | 52.8 | 66.3 | 55.2 | 39.0 | 0.0 | 44.0 | 55.2 |

| C - Address relationship between Brown Field Municipal Airport and Tijuana's International Airport operations and existing and future residential land use | | | | | | | | | |
|----------------------------------------------------------------------------|--------|-----|-----|-------------|-------------|----------|-----|----------|----------|------------|---------|-------|
| Tratar la conexión entre las operaciones de los aeropuertos de Brown Field y Tijuana y los usos de suelo residencial existente y futuro | 18.3 | 19.0 | 17.8 | 27.0 | 15.5 | 8.2 | 28.4 | 15.7 | 18.1 | 0.0 | 0.0 | 5.5 |

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.

Environmental Priorities

(Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participate on 10/3/05)

- B-Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)
  - Tratar los corredores fluviales en áreas urbanas (i.e. Río Alamar y Río Otay)

- A-Address conservation of sensitive habitat corridors
  - Tratar la conservación de corredores ecológicos sensibles

Relative Importance

- All Participants (115)
- Mexico (52)
- USA (63)
- Local Gov (32)
- State Gov (15)
- Fed Gov (14)
- CBO (7)
- Business (20)
- Academia (11)
- News Media (0)
- Local Gov (32)
- Other (6)
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.

### Environmental Priorities*

(Combined responses from participants on 10/3/05 and participants from 10/11/05 who did not participate on 10/3/05)

<table>
<thead>
<tr>
<th>Environmental Priorities*</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov't</th>
<th>State Gov't</th>
<th>Fed Gov't</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)</td>
<td>64.3</td>
<td>67.3</td>
<td>61.9</td>
<td>68.8</td>
<td>73.3</td>
<td>71.2</td>
<td>57.1</td>
<td>60.0</td>
<td>54.5</td>
<td>0.0</td>
<td>66.7</td>
<td>50.0</td>
</tr>
<tr>
<td>Tratar los corredores fluviales en áreas urbanas (i.e. Río Alamar y Río Otay)</td>
<td>64.3</td>
<td>67.3</td>
<td>61.9</td>
<td>68.8</td>
<td>73.3</td>
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<td>54.5</td>
<td>0.0</td>
<td>66.7</td>
<td>50.0</td>
</tr>
<tr>
<td>A-Address conservation of sensitive habitat corridors</td>
<td>35.7</td>
<td>32.7</td>
<td>38.1</td>
<td>31.2</td>
<td>26.7</td>
<td>28.6</td>
<td>42.9</td>
<td>40.0</td>
<td>45.5</td>
<td>0.0</td>
<td>33.3</td>
<td>50.0</td>
</tr>
<tr>
<td>Tratar la conservación de corredores ecológicos sensibles</td>
<td>35.7</td>
<td>32.7</td>
<td>38.1</td>
<td>31.2</td>
<td>26.7</td>
<td>28.6</td>
<td>42.9</td>
<td>40.0</td>
<td>45.5</td>
<td>0.0</td>
<td>33.3</td>
<td>50.0</td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.
Environmental Priorities*

<table>
<thead>
<tr>
<th>Environmental Priority</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td><strong>D-Water Quality</strong></td>
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</tr>
<tr>
<td>Calidad de Agua</td>
<td>55.0</td>
<td>50.7</td>
<td>68.8</td>
<td>55.8</td>
<td>37.1</td>
<td>55.2</td>
<td>66.0</td>
<td>63.7</td>
<td>46.2</td>
<td>0.0</td>
<td>66.0</td>
<td>66.5</td>
</tr>
<tr>
<td><strong>A-Address conservation of sensitive habitat corridors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tratar la conservación de corredores ecológicos sensibles</td>
<td>54.0</td>
<td>57.5</td>
<td>38.3</td>
<td>54.1</td>
<td>70.6</td>
<td>40.6</td>
<td>0.0</td>
<td>45.9</td>
<td>86.4</td>
<td>0.0</td>
<td>0.0</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>B-Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tratar los corredores fluviales en áreas urbanas (i.e. Río Alamar y Río Otay)</td>
<td>46.1</td>
<td>50.1</td>
<td>33.1</td>
<td>45.4</td>
<td>45.5</td>
<td>47.8</td>
<td>100.0</td>
<td>56.2</td>
<td>19.8</td>
<td>0.0</td>
<td>33.0</td>
<td>33.0</td>
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<tr>
<td><strong>C-Air Quality</strong></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Calidad de Aire</td>
<td>40.4</td>
<td>38.2</td>
<td>51.1</td>
<td>41.8</td>
<td>37.2</td>
<td>51.4</td>
<td>33.0</td>
<td>30.5</td>
<td>46.2</td>
<td>0.0</td>
<td>100.0</td>
<td>33.0</td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
Interactive Polling Questions
October 3, 2005 and October 11, 2005

BACKGROUND INFORMATION / ANTECEDENTES

Where do you live? / ¿Dónde vive usted?
1. Mexico
2. USA

What is your organizational affiliation? / ¿A qué tipo de organización pertenece?
1. Local Government / Gobierno Municipal
2. State Government / Gobierno Estatal
3. Federal Government / Gobierno Federal
4. Community Based Organization / Organización de la Comunidad
5. Business / Sector Privado Empresarial
6. Academia / Académico
7. News Media / Medios de Comunicación
8. Private Citizen / Ciudadano
9. Other / Otro

Did you participate in the first workshop held in National City on October 3rd?
¿Participó en el primer taller el 3 de octubre en National City? (Tijuana - 10/1105 meeting only)
1. Yes / Sí
2. No / No

EXAMPLE OPINION POLL / EJEMPLO DE SONDEO DE OPINIÓN

Which do you prefer for Breakfast? / ¿Qué prefiere para el desayuno?
A. Caffeinated Coffee / Café
B. Decaffeinated Coffee / Café descafeínado
C. Bloody Mary / Bloody Mary
TRANSPORTATION / TRANSPORTE

Which is more important? / ¿Cuál es más importante?

A. Future East Otay Mesa - Otay II Port of Entry and connecting roads
   Futuro cruce fronterizo East Otay Mesa - Otay II y caminos de acceso

B. Improvements to existing Otay Mesa Port of Entry and connecting roads
   Mejoras en el actual cruce fronterizo de Otay Mesa y caminos de acceso

C. Improvements to cross-border and regional public transportation services
   Mejoras al transporte público transfronterizo y regional

TRANSPORTATION FUNDING / FINANCIAMIENTO DE TRANSPORTE

Which do you prefer? / ¿Cuál prefiere?

A. Toll Revenues for new ports of entry and access roads
   Peaje para nuevos cruces fronterizos y caminos de acceso

B. Additional local gas tax
   Impuesto adicional a la gasolina

C. Additional residential development impact fees for transportation
   Cobrar una aportación en nuevos desarrollos para apoyar el transporte
   Non-residential development impact fees for transportation
   Cobrar una aportación a desarrollos no residenciales para apoyar el transporte

ECONOMIC DEVELOPMENT / DESARROLLO ECONÓMICO

Which is more important? / ¿Cuál es más importante?

A. Promote creation or expansion of common economic clusters on both sides of the border
   Promover la creación o expansión de los sectores económicos comunes en ambos lados de la frontera

B. Address future industrial land supply and demand
   Analizar la oferta y demanda futura para suelo industrial

C. Address relationship between the area’s airports operations and existing and future industrial land use
   Entender la relación entre las operaciones de los aeropuertos del área y los usos de suelo industriales existentes y futuros

D. Address infrastructure needs of existing and future industrial land uses (water, energy, etc.)
   Cubrir las necesidades de infraestructura para usos de suelo industriales existentes y futuros (agua, energía, etc.)
**HOUSING / VIVIENDA**

**Which is more important? / ¿Cuál es más importante?**

A. Address future housing supply and demand
   Analizar la oferta y demanda de vivienda a futuro

B. Address housing affordability issues and opportunities
   Analizar la posibilidad de ofrecer/crear vivienda de bajo costo

C. Address relationship between Brown Field Municipal Airport and Tijuana's International Airport operations and existing and future residential land use
   Entender la relación entre las operaciones de los aeropuertos de Brown Field y Tijuana y los usos de suelo residencial existente y futuro

D. Address infrastructure needs of existing and future residential land use (water, sewage, schools, etc.)
   Analizar la demanda de infraestructura para los usos de suelo residencial existente y futuro (agua, drenaje, escuelas, etc.)

**ENVIRONMENT / MEDIO AMBIENTE**

**Which is more important? / ¿Cuál es más importante?**

A. Address conservation of sensitive habitat corridors
   Tener políticas para la conservación de corredores ecológicos

B. Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)
   Realizar las acciones adecuadas para mantener y proteger los ríos urbanos (i.e. Río Alamar y Río Otay)
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.

### Transportation Priorities*

<table>
<thead>
<tr>
<th></th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov't</th>
<th>State Gov't</th>
<th>Fed Gov't</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Responses</strong></td>
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<td>65</td>
<td>21</td>
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<td>19</td>
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<td>12</td>
<td>12</td>
<td>0</td>
<td>3</td>
<td>4</td>
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<tr>
<td>B- Improvements to existing Otay Mesa Port of Entry and connecting roads</td>
<td>52.9</td>
<td>52.4</td>
<td>53.1</td>
<td>45.8</td>
<td>57.7</td>
<td>64.7</td>
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<td>0</td>
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<td>50.0</td>
</tr>
<tr>
<td>Mejoras en el actual cruce fronterizo de Otay Mesa y caminos de acceso</td>
<td>51.2</td>
<td>59.5</td>
<td>48.5</td>
<td>50.0</td>
<td>38.5</td>
<td>41.2</td>
<td>71.4</td>
<td>58.3</td>
<td>50.0</td>
<td>0</td>
<td>66.7</td>
<td>75.0</td>
</tr>
<tr>
<td>A- Future East Otay Mesa - Otay II Port of Entry and connecting roads</td>
<td>44.2</td>
<td>38.1</td>
<td>46.2</td>
<td>50.0</td>
<td>50.0</td>
<td>44.1</td>
<td>42.9</td>
<td>29.2</td>
<td>50.0</td>
<td>0</td>
<td>50.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Futuro cruce fronterizo East Otay Mesa - Otay II y caminos de acceso</td>
<td>44.2</td>
<td>38.1</td>
<td>46.2</td>
<td>50.0</td>
<td>50.0</td>
<td>44.1</td>
<td>42.9</td>
<td>29.2</td>
<td>50.0</td>
<td>0</td>
<td>50.0</td>
<td>25.0</td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
This survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.

### Transportation Funding Priorities*

<table>
<thead>
<tr>
<th>Number of Responses</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-Toll Revenues for new ports of entry and access roads</strong></td>
<td>84</td>
<td>21</td>
<td>63</td>
<td>24</td>
<td>12</td>
<td>16</td>
<td>7</td>
<td>12</td>
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<td>4</td>
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<td>Peaje para nuevos cruces fronterizos y caminos de acceso</td>
<td>67.0</td>
<td>42.9</td>
<td>75.0</td>
<td>70.8</td>
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<td>91.7</td>
<td>37.5</td>
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<tr>
<td><strong>E-Non-residential development impact fees for transportation</strong></td>
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<td>50.8</td>
<td>56.2</td>
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<td>46.9</td>
<td>42.9</td>
<td>39.6</td>
<td>58.3</td>
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<td>50.0</td>
<td>50.0</td>
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<tr>
<td><strong>B-Additional TransNet sales tax</strong></td>
<td>44.0</td>
<td>57.1</td>
<td>39.7</td>
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<td>0.0</td>
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<td><strong>D-Additional residential development impact fees for transportation</strong></td>
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<td>17.9</td>
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<td>30.2</td>
<td>31.2</td>
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<td>39.3</td>
<td>37.5</td>
<td>16.7</td>
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<td>31.2</td>
<td>25.0</td>
<td>39.3</td>
<td>37.5</td>
<td>16.7</td>
<td>0.0</td>
<td>75.0</td>
<td>12.5</td>
</tr>
</tbody>
</table>

* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
The survey was structured to explore and understand the various perspectives of the participants. The results of the survey are not statistically representative of the community as a whole.

### Economic Development Priorities*

<table>
<thead>
<tr>
<th>Number of Responses</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Address infrastructure needs of existing and future industrial land uses (water, energy, etc.)</td>
<td>85</td>
<td>21</td>
<td>64</td>
<td>24</td>
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<tr>
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<td>69.5</td>
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<td>74.8</td>
<td>72.0</td>
<td>0.0</td>
<td>88.7</td>
<td>91.5</td>
</tr>
<tr>
<td>A-Promote creation or expansion of common clusters on both sides of the border</td>
<td>51.8</td>
<td>56.8</td>
<td>50.2</td>
<td>44.2</td>
<td>52.5</td>
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<td>0.0</td>
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<td>74.5</td>
</tr>
<tr>
<td>Promover la creación o expansión de los sectores económicos comunes en ambos lados de la frontera</td>
<td>38.4</td>
<td>45.7</td>
<td>36.1</td>
<td>44.1</td>
<td>33.0</td>
<td>33.1</td>
<td>42.6</td>
<td>41.3</td>
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<td>16.5</td>
</tr>
<tr>
<td>B-Address future industrial land supply and demand</td>
<td>32.4</td>
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<td>35.2</td>
<td>40.1</td>
<td>30.5</td>
<td>35.1</td>
<td>61.7</td>
<td>16.6</td>
<td>16.5</td>
<td>0.0</td>
<td>11.0</td>
<td>16.5</td>
</tr>
<tr>
<td>Tratar la oferta y demanda futura de suelo industrial</td>
<td>32.4</td>
<td>23.7</td>
<td>35.2</td>
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<td>30.5</td>
<td>35.1</td>
<td>61.7</td>
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<td>16.5</td>
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<td>11.0</td>
<td>16.5</td>
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* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
## Housing Priorities*

<table>
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<tr>
<th>Session</th>
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<th>State Gov't</th>
<th>Fed Gov't</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
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<tbody>
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<td>6</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>D-Address infrastructure needs of existing and future residential land use (water, sewage, schools, etc.)</strong></td>
<td></td>
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<tr>
<td>Tratar las necesidades de infraestructura de usos de suelo residencial existente y futuro (agua, drenaje, escuelas, etc.)</td>
<td>74.8</td>
<td>74.4</td>
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<td>71.9</td>
<td>77.5</td>
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<td>83.1</td>
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<td>0.0</td>
<td>66.3</td>
<td>74.8</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Tratar la oferta y demanda futura de vivienda</td>
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<td>44.1</td>
<td>38.5</td>
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<tr>
<td><strong>C-Address relationship between Brown Field Municipal Airport and Tijuana’s International Airport operations and existing and future residential land use</strong></td>
<td></td>
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<tr>
<td>Tratar la conexión entre las operaciones de los aeropuertos de Brown Field y Tijuana y los usos de suelo residencial existente y futuro</td>
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* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
### Environmental Priorities*

<table>
<thead>
<tr>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov't</th>
<th>State Gov't</th>
<th>Fed Gov't</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
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<tbody>
<tr>
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<td>B-Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)</td>
<td>66.7</td>
<td>75.0</td>
<td>63.9</td>
<td>66.7</td>
<td>66.7</td>
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<td>57.1</td>
<td>72.7</td>
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<td>66.7</td>
</tr>
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<td>33.3</td>
<td>25.0</td>
<td>36.1</td>
<td>33.3</td>
<td>33.3</td>
<td>28.6</td>
<td>42.9</td>
<td>27.3</td>
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<td>33.3</td>
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</table>

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<table>
<thead>
<tr>
<th>Transportation Priorities*</th>
<th>Tijuana – October 11, 2005</th>
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<tr>
<td><strong>Number of Responses</strong></td>
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</tr>
<tr>
<td>B-Improvements to existing Otay Mesa Port of Entry and connecting roads</td>
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<tr>
<td>Mejoras en el actual cruce fronterizo de Otay Mesa y caminos de acceso</td>
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</tr>
<tr>
<td>A-Future East Otay Mesa - Otay II Port of Entry and connecting roads</td>
<td>32.5</td>
</tr>
<tr>
<td>Mejoras al transporte público transfronterizo y regional</td>
<td>32.5</td>
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* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
### Transportation Funding Priorities*

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<tr>
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<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov't</th>
<th>State Gov't</th>
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<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
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<tbody>
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<td><strong>Number of Responses</strong></td>
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<td>19</td>
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<td>9</td>
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<td>63.5</td>
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</tr>
<tr>
<td><strong>E-Non-residential development impact fees for transportation</strong></td>
<td>60.1</td>
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<td>54.1</td>
<td>74.6</td>
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<td>50.9</td>
<td>79.6</td>
<td>0.0</td>
<td>33.0</td>
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<tr>
<td><strong>D-Additional residential development impact fees for transportation</strong></td>
<td>44.1</td>
<td>47.8</td>
<td>28.3</td>
<td>53.9</td>
<td>22.0</td>
<td>55.2</td>
<td>33.0</td>
<td>33.1</td>
<td>46.4</td>
<td>0.0</td>
<td>0.0</td>
<td>66.0</td>
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<tr>
<td><strong>C-Additional local gas tax</strong></td>
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<td>47.4</td>
<td>34.8</td>
<td>29.4</td>
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<td>66.0</td>
<td>40.8</td>
<td>13.2</td>
<td>0.0</td>
<td>66.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

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### Economic Development Priorities*

<table>
<thead>
<tr>
<th>Economic Development Priority</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
<th>CBO</th>
<th>Business</th>
<th>Academia</th>
<th>News Media</th>
<th>Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Address infrastructure needs of existing and future industrial land uses (water, energy, etc.)</td>
<td>77.7</td>
<td>79.0</td>
<td>74.1</td>
<td>73.4</td>
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<td>86.4</td>
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</tr>
<tr>
<td>Tratar las necesidades de infraestructura de usos de suelo industriales existentes y futuros (agua, energía, etc.)</td>
<td></td>
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<tr>
<td>B-Address future industrial land supply and demand</td>
<td>48.2</td>
<td>44.8</td>
<td>63.7</td>
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<td>53.6</td>
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<tr>
<td>Tratar la oferta y demanda futura de suelo industrial</td>
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</tr>
<tr>
<td>A-Promote creation or expansion of common clusters on both sides of the border</td>
<td>47.6</td>
<td>51.5</td>
<td>35.5</td>
<td>47.0</td>
<td>45.5</td>
<td>47.8</td>
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<td>66.4</td>
<td>0.0</td>
<td>66.0</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>C-Address relationship between Brown Field Municipal Airport and Tijuana’s International Airport operations and existing and future industrial land use</td>
<td>20.8</td>
<td>18.4</td>
<td>22.8</td>
<td>15.6</td>
<td>20.6</td>
<td>40.7</td>
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<td>12.7</td>
<td>6.6</td>
<td>0.0</td>
<td>33.0</td>
<td>33.0</td>
</tr>
<tr>
<td>Tratar la conexión entre las operaciones de los aeropuertos de Brown Field y Tijuana y los usos de suelo industriales existentes y futuros</td>
<td></td>
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</tr>
</tbody>
</table>

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## Housing Priorities*

<table>
<thead>
<tr>
<th>Number of Responses</th>
<th>All Participants</th>
<th>Mexico</th>
<th>USA</th>
<th>Local Gov’t</th>
<th>State Gov’t</th>
<th>Fed Gov’t</th>
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<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Address infrastructure needs of existing and future residential land use (water, sewage, schools, etc.)</td>
<td>85.7</td>
<td>86.5</td>
<td>84.4</td>
<td>85.8</td>
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<td>88.7</td>
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<td>86.4</td>
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<td>66.0</td>
<td>100.0</td>
</tr>
<tr>
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<td>57.9</td>
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<td>0.0</td>
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<tr>
<td>A-Address future housing supply and demand</td>
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Environmental Priorities*

<table>
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<tr>
<th>Number of Responses</th>
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<th>Mexico</th>
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<th>State Gov't</th>
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</thead>
<tbody>
<tr>
<td>B-Address conservation of urban river corridors (e.g. Alamar River and Otay River Watershed)</td>
<td>60.3</td>
<td>68.2</td>
<td>38.5</td>
<td>77.8</td>
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<td>40.0</td>
<td>0.0</td>
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<td>50.0</td>
</tr>
<tr>
<td>Tratar los corredores fluviales en áreas urbanas (i.e. Río Alamar y Río Otay)</td>
<td>39.7</td>
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<td>61.5</td>
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**Environmental Priorities**

<table>
<thead>
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<th>Environmental Priority</th>
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* Relative priority on a scale of 1 (low) to 100 (high) determined using a paired-comparison technique where participants select their preference from each possible pair of alternatives.
BIOLOGICAL RESOURCES

The following tables depict plant and animal species which are found in the various habitats of the study area.

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Source: Plants - Las Californias Binational Conservation Initiative; Page 23

### CALIFORNIAN

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Source: Plants - Las Californias Binational Conservation Initiative; Page 23

## CHAPARRAL

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Source: Plants - Las Californias Binational Conservation Initiative; Page 23

## OTAY RIVER WATERSHED

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## ALAMAR RIVER WATERSHED

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**Source:** The Partial Program for Conservation and Urban Improvement of the Alamar River Zone
APPENDIX C

Mexico’s Housing Financing Mechanisms

The largest financer of housing in Mexico is the National Fund Institute for Workers Housing (Instituto de Fondo Nacional de la Vivienda para los Trabajadores - INFONAVIT). Funded by a compulsory contribution by employers of five percent of employees’ wages, INFONAVIT currently provides over half the loans for developer-built homes (and about three quarters of the loan value). It has public and private membership on its governing board.

The Federal Mortgage Agency (Sociedad Hipotecaria Federal - SHF) is the second largest lender in Mexico, which is a federal development bank and is owned by the federal government. This organization channels funds through private Mexican commercial banks. It has the broadest market for loans, including home loans, home equity loans, and construction loans. In addition, it is the only institution that offers loans to workers that are not part of the formal economy.

The third largest capital source is Housing Fund for Civil Servants (Fondo de Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado - FOVISSSTE). It is the public sector equivalent to INFONAVIT and is funded by a five percent employee contribution. Loans are distributed based on a lottery system.

There are three other public agencies that offer home loans. They are Peoples Housing Fund (Fideicomiso Fondo Nacional de Habitaciones Populares - FONHAPO), States’ Housing Organization (Organismos Estatales de Vivienda - OREVIS), and Mortgage and Public Works Bank (Banco Nacional de Obras y Servicios Públicos - BANOBRAS). These lending institutions and private banks represent only a small segment of the home loan industry.

Unlike financing in Mexico, the U.S. lending market is mostly funded by private lending institutions with the exception of government sponsored institutions (e.g., Freddie Mac and Fannie Mae). Funding is available for residential sales and rental unit construction. It has no formal national employee contribution program, though, funding for the home loan industry does receive a lot of its capital from public and private employee pension investments funds.

### Glossary of Acronyms and Terms

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Introduction

On August 4, 2006, the SANDAG Board of Directors approved a set of recommended next steps as outcomes from the 2006 San Diego Regional Tribal Summit. One of those next steps was the formation of an ongoing Interagency Technical Working Group on Tribal Transportation Issues (Working Group). The purpose of this Working Group is to serve as a forum for tribal governments in the region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region, including SANDAG, Caltrans, the County of San Diego, and the transit providers. The Borders Committee is asked to approve the attached draft charter for this Working Group.

Discussion

It is through the Borders Committee that SANDAG has been pursuing government-to-government relations with tribal governments in the region. As part of its strategic objectives for FY 2005, the Borders Committee intensified its efforts to engage tribal governments through various activities. Through partnerships with the Reservation Transportation Authority (RTA) and the Southern California Tribal Chairmen’s Association (SCTCA), a mechanism for government-to-government relations is being developed to engage tribes in the regional transportation planning process. The SCTCA, an intertribal council of governments, is now a member of the Borders Committee, joining the Western Riverside Council of Governments (WRCOG), the Imperial Valley Association of Governments (IVAG), the Orange County Council of Governments (OCCG), and the Republic of Mexico in that same capacity.

During FY 2006, the Borders Committee worked diligently on strengthening communication and coordination on regional and transportation planning issues with tribal nations in the region. Together with Caltrans, the County of San Diego, the RTA, and the SCTCA, SANDAG developed an integrated work plan for the inclusion of tribal issues in the 2007 Regional Transportation Plan through a series of studies, planning activities, and the convening of a Tribal Summit.

Recommendation

The Borders Committee is asked to approve the attached draft Charter for a new Interagency Technical Working Group on Tribal Transportation Issues.
As part of this interagency effort, in February of 2006 Caltrans convened a technical workshop between tribal transportation managers and planning staff from the public agencies in the region to develop strategies for improving tribal transportation programs. The strategies that were collectively developed were brought forward to the elected officials at the 2006 San Diego Regional Tribal Summit held in March 2006.

The success of that workshop highlighted the importance of having a regular venue in which tribal and public agency staff can communicate and exchange information on transportation-related issues. One of the recommendations of the Tribal Summit was to form an ongoing working group. Thus the SANDAG Board approved the formation of an Interagency Technical Working Group on Tribal Transportation Issues at its August 4, 2006, meeting.

The Working Group responsibilities will include reviewing current activities and plans being implemented by SANDAG and tribal governments in an effort to coordinate programs, address issues of mutual concern, and ensure that the results of those discussions are being incorporated into the transportation planning process at the regional level. The Working Group will provide feedback and comments on current and planned activities and will provide input on the implementation of these activities. The Working Group will also assist with the associated outreach to the tribal community on transportation issues of regional significance.

**Next Steps**

Staff from Caltrans, SANDAG, and the RTA are currently planning to convene this group to discuss various current grant-funded projects and planning activities related to the 2007 RTP process.

BOB LEITER  
Director of Land Use and Transportation Planning

Attachment: 1. Draft Charter for Interagency Technical Working Group on Tribal Transportation Issues

Staff Contact: Jane Clough-Riquelme, (619) 699-1909, jcl@sandag.org
PURPOSE
The purpose of the Interagency Technical Working Group on Tribal Transportation Issues (Working Group) is to serve as a forum for tribal governments in the region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region, including SANDAG, Caltrans, the County of San Diego, and the transit operators. In partnership with the Reservation Transportation Authority (RTA), the Working Group will monitor and provide input on the implementation of the strategies and planning activities related to transportation mutually developed through the San Diego Regional Tribal Summit. There is currently no other working group that can serve this function.

LINE OF REPORTING
The Working Group reports to the Borders Committee, which reports to the Board of Directors on tribal-related transportation activities.

RESPONSIBILITIES
The Working Group responsibilities include reviewing current activities and plans being implemented by SANDAG and the tribal governments in an effort to coordinate programs, address issues of concern, and ensure that the needs and issues of tribal governments are being incorporated into the transportation planning process at the regional level. The Working Group will provide feedback and comments on current and planned activities and provide technical advice on the implementation of these activities. The Working Group also assists with the associated outreach to the tribal community on transportation issues of regional significance.

MEMBERSHIP
The Working Group membership is open to one designated representative from each of the federally recognized tribal governments and California tribes in the San Diego region, as well as one staff representative from Caltrans, County of San Diego, Metropolitan Transit Service, and North County Transit District. The Co-Chairs of the Working Group will be chosen by the members of the group on a periodic basis.

MEETING TIME AND LOCATION
The Working Group will meet quarterly on the _____ of the month from _____ to ____. The location will rotate among tribal reservations, and, when deemed appropriate, at the SANDAG offices.

DURATION OF EXISTENCE
The Working Group will continue as long as the tribal governments and participating agencies determine that it serves as an effective means of communication and coordination.
2007 REGIONAL TRANSPORTATION PLAN (RTP) WHITE PAPER: CROSSBORDER TRANSPORTATION

Introduction

SANDAG has identified several key issue areas to be addressed in the 2007 Regional Transportation Plan (RTP) update. For each of these areas, staff is preparing a white paper to generate discussion and gather input from SANDAG’s policy committees and working groups. The Crossborder Transportation white paper describes current travel conditions at the San Diego-Baja California Ports of Entry (POEs), identifies problems, and outlines potential solutions or alternatives. Recommendations from this paper will help guide the evaluation of projected crossborder travel demand and the assessment of needs related to border transportation infrastructure and services.

On July 18, 2006, staff presented the Crossborder Transportation paper to the Regional Planning Stakeholders Working Group. Comments from this working group have been addressed in the attached paper, as appropriate. On September 5, 2006, the Committee on Binational Regional Opportunities is scheduled to discuss this white paper. The Crossborder Transportation white paper has been translated to Spanish to facilitate information sharing with stakeholders in Baja California.

Discussion

Border regions face the challenge of balancing security and the efficient movement of people and goods through the international POEs. Over time delays at the border have increased and become more unpredictable.

The Crossborder Transportation white paper describes several projects that would improve crossborder travel capacity and enhance security at the San Diego-Baja California border region. However, most of these projects have limited funding available for implementation, share challenges for timely implementation, and compete with development pressure and rapid growth along the border.

These challenges can lead to opportunities to work with policy makers to advance transportation projects with the goal of reducing congestion and crossborder delays, while enhancing security and improving the economy. Input from technical committees and working groups will be shared with SANDAG’s policy committees to develop strategies for inclusion in the 2007 RTP.
Next Steps

After review and comments from the Borders Committee, the Transportation Committee will be asked to accept the Crossborder Transportation white paper for planning purposes in the 2007 RTP in October 2006.

BOB LEITER
Director of Land Use and Transportation Planning

Attachments: 1. Crossborder Transportation white paper for the 2007 RTP
2. Crossborder Transportation white paper for the 2007 RTP (Spanish translation)

Key Staff Contact: Elisa Arias, (619) 699-1936, ear@sandag.org
INTRODUCTION

For many years, radio and television stations have been broadcasting traffic reports for major highways in the San Diego region. But it was not until the past few years that those traffic reports also began transmitting information on the number of vehicles and pedestrians waiting to cross at the Tijuana-San Diego border crossings.

Every day, about 68,000 passenger vehicles and 30,000 pedestrians travel from Mexico through the San Ysidro, Otay Mesa, and Tecate ports of entry (POEs). More than 2,500 northbound trucks also cross the border at Otay Mesa and Tecate on a daily basis. A similar number of border crossings are estimated to take place in the southbound direction.

Border regions face the challenge of balancing security and the efficient movement of people and goods through the international POEs. Over time, delays at the border have increased and become more unpredictable. These delays—especially in the northbound direction—are a result of growth in crossborder travel, transportation infrastructure that has failed to keep pace with this growth, and the implementation of stricter security screenings.

Objectives for 2007 RTP

The objectives of this white paper for the 2007 RTP are threefold. They include:

1. Assessing current crossborder travel conditions.
2. Identifying current and future multimodal transportation needs to facilitate crossborder travel, based on an evaluation of projected growth in the San Diego-Baja California border region.
3. Evaluating potential traditional and innovative funding sources to advance implementation of transportation and port of entry infrastructure.

Background

San Diego Region-Baja California Ports of Entry: Current Conditions

Three POEs link the San Diego region and Baja California. The San Ysidro-Puerta México border crossing serves passenger vehicles and pedestrians while the Otay Mesa-Mesa de Otay and the Tecate-Tecate POEs handles passenger vehicles, pedestrians, and commercial vehicles. Freight rail inspections are conducted at the San Ysidro rail yard. Figure 1 illustrates the border region and the three POEs.
Figure 1
San Diego-Baja California Ports of Entry
San Ysidro-Puerta México

The San Ysidro POE is the busiest passenger border crossing along the United States-Mexico border. In fact, it is reported to be the busiest land port of entry in the world. It operates 24 hours a day, seven days a week, and handles about 70 percent of the vehicle crossings and more than 80 percent of people traveling on foot into the San Diego region.

Up to four of the 24 primary vehicle inspection lanes at the San Ysidro POE are dedicated commuter or SENTRI\(^1\) lanes, where travelers and vehicles that have passed background checks and inspections are processed more quickly. The SENTRI vehicle lanes operate between 4 a.m. and midnight, seven days a week. A separate pedestrian facility serves people crossing on foot. Since September 2004, a pedestrian SENTRI lane has been operating as a trial program during peak crossing hours (5 to 9 a.m. and 3 to 7 p.m.) on weekdays.

Processing of bicyclists is handled at the pedestrian facility. Following a significant increase in travelers crossing the border on bicycles after 9/11, CPB allowed cyclists to be processed ahead of other pedestrians in line. However, this expedited process was terminated in May 2006 because, according to CBP, some crossborder travelers rented bicycles just before crossing the border to get ahead in the pedestrian line.\(^2\)

To accommodate crossborder cyclists who continue their trip by other modes, Caltrans has installed a small bicycle parking facility with racks for about 15 bicycles west of Interstate 5 (I-5) (on Camiones Way). A second bicycle parking facility will be located east of I-5 (on San Ysidro Boulevard adjacent to the I-5/San Ysidro Boulevard on-ramp). This facility will accommodate parking for about 110 bikes and is expected to be completed in spring 2007.

Completed in 2005 and adjacent to the San Ysidro POE, the San Ysidro Intermodal Transportation Center improved pedestrian access to the Blue Line Trolley, intercity buses, taxis, and shuttles. More than 28,000 people are estimated to access transit services at this location daily.

Otay Mesa-Mesa de Otay

The Otay Mesa POE is the busiest commercial border crossing on the California-Mexico border. Among all United States-Mexico commercial POEs, Otay Mesa-Mesa de Otay ranks third in terms of trade value, after the Laredo and El Paso POEs in Texas. In 2005, the Otay Mesa-Mesa de Otay border station handled $24.4 billion in merchandise in both directions, which were moved in more than 1.4 million trucks. Loaded trucks crossing into San Diego are processed from 6 a.m. to 8 p.m. on weekdays.

In 2005, the Free and Secure Trade (FAST) program began operating at the Otay Mesa POE. FAST is a commercial process offered to pre-approved importers, carriers, and registered drivers that results in quicker clearance across the border.

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\(^1\) SENTRI is the acronym for Secure Electronic Network for Travelers Rapid Inspection. This program began operating at the Otay Mesa POE in 1995 and at the San Ysidro POE in 2000. In June 2005, two additional lanes were converted for optional SENTRI use at San Ysidro depending on traffic conditions.

\(^2\) Before 9/11, bicyclists were inspected at the primary inspection booths for the current SENTRI lanes. However, since then, CBP has moved all bicyclists to the pedestrian facility for safety reasons.
Since 2003, the passenger inspection facility operates 24 hours a day, seven days a week, and serves about one-fourth of the northbound passenger vehicle and bus crossings. There is a total of 14 inspection lanes at this facility. One is a SENTRI lane that operates between 5 a.m. and 8 p.m., seven days a week. People crossing on foot are processed at a separate pedestrian facility.

The Metropolitan Transit System (MTS) operates bus Route 905 between the Otay Mesa POE, the Iris Trolley Station, and the San Ysidro Trolley Station every 30 minutes on weekdays during morning and afternoon peak periods. Service starts at 4:50 a.m. and ends at 7 p.m. However, there is no service between 10 a.m. and 1 p.m. In 2005, nearly 441,000 passengers traveled on MTS Route 905.

Tecate-Tecate

The Tecate POE is the smallest of the three land border crossings in the San Diego-Baja California region. The passenger inspection facility operates seven days a week between 5 a.m. and 11 p.m., with two inspection lanes. This border station also handles commercial vehicles. Northbound loaded trucks are processed from 8 a.m. to 4 p.m. on weekdays.

Figures 2 and 3 show historical northbound border crossing data at the three POEs for pedestrians and personal vehicles, including buses. Figure 4 illustrates northbound truck crossings as well as U.S.-Mexico trade by truck via the Otay Mesa and Tecate commercial POEs.

**Figure 2**  
Northbound Pedestrian Crossings

![Northbound Pedestrian Crossings](image)

Figure 3
Northbound Passenger Vehicle and Bus Crossings


Figure 4
Northbound Truck Crossings and Two-Way Truck Trade via the Otay Mesa and Tecate POEs

Sources: U.S. Customs and Border Protection, Field Operations Office. Data represent federal fiscal year.
U.S. Bureau of Transportation Statistics, Transborder Freight Data.
Identification of Problems

Despite significant growth in bilateral trade moving across the Otay Mesa-Mesa de Otay and Tecate-Tecate POEs and established social and economic ties between the San Diego-Baja California border region, few improvements to border crossing infrastructure have been implemented in the San Diego-Baja California border during the past 20 years. Projected population increases and continued growth in international trade will result in greater demands on the existing infrastructure.

On a typical day, approximately 160,000 people cross the border from Mexico into the San Diego region in private vehicles, buses, and on foot. By 2030, crossborder vehicle traffic is projected to double from current volumes (2005).

Congestion and delays for freight movements and crossborder personal travel at the San Diego-Baja California POEs have increased and have become more unpredictable. These delays were estimated to cost the San Diego-Baja California economies nearly $4.2 billion in lost output and a loss of more than 35,000 jobs in 2005. Both output and job losses are projected to more than double in the next ten years if steps are not taken to improve border crossing and transportation infrastructure and management. Air quality at the border also is affected by excessive idling from trucks and private vehicles.

While the priority mission of U.S. Customs and Border Protection (CBP) is homeland security, one of CBP’s strategic goals is to “facilitate the more efficient movement of legitimate cargo and people.” CBP has implemented programs such as SENTRI and FAST to expedite border crossings for pre-screened participants. Up to four vehicle SENTRI lanes and one pedestrian SENTRI lane operate at San Ysidro and one vehicle SENTRI lane functions at Otay Mesa, but even these lanes experience congestion at peak periods. Innovative approaches to manage current POE infrastructure as well as to develop and operate new, smart border crossings will be needed to accomplish CBP’s goals.

Better intermodal access for travelers who cross on foot also is needed. Pedestrians crossing from Mexico are unable to be picked up conveniently since there are no short-term parking lots in the vicinity of the San Ysidro or Otay Mesa POEs. Unlike the Blue Line Trolley in San Ysidro, the stop for MTS Route 905 is not adjacent to the Otay Mesa inspection facility.

Improving or developing new border crossings and connecting roads is more complex than implementing transportation projects within the San Diego region. In addition to sharing similar funding shortfalls, POE projects involve close coordination and collaboration with governmental agencies on both sides of the international border at the federal, state, regional, and municipal levels. Project development includes the border stations in each country and roads connecting those border stations to the regional transportation network. Various entities are responsible for different planning, approval, and implementation activities in the United States and Mexico, which results in long lead times for project completion.

There are community concerns regarding the impact that the upcoming implementation of the US-VISIT program may have on southbound vehicular traffic, including backups on Interstates 5 and 805 and local interchanges in San Ysidro. In addition, the Western Hemisphere Travel Initiative will

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require U.S., Mexican, and Canadian citizens entering or re-entering the United States through land POEs to carry a valid passport by January 1, 2008.\textsuperscript{5}

Both land POEs and connecting regional highways are an integral component of international and domestic trade corridors. Since benefits from trade expand well beyond the San Diego region to California and the United States, it is vital to secure scarce state and federal resources to improve this trade corridor infrastructure.

**DISCUSSION**

**Potential Solutions/Alternatives**

As described in this section, several projects to improve crossborder travel capacity and security are under various planning and execution stages. However, most of these projects have limited funding available for implementation.

The U.S. Department of Homeland Security has begun to implement the US-VISIT program, which will lead to an automated entry/exit system for crossborder travelers at the land POEs. Incorporating smart border technologies to optimize security screenings of people, vehicles, and trade at the POEs will be crucial to facilitate crossborder travel while enhancing security at the border.

**Land POEs, Highways, and Transit**

**San Ysidro POE Realignment**

The U.S. General Services Administration (GSA) is leading a project to upgrade and expand the San Ysidro border station to increase efficiency, security, and safety for federal agencies and crossborder travelers. In 2002, GSA prepared a Feasibility Study that developed four expansion options, including facility layouts and north-south traffic routes. Three of the four options were devised to align with a southbound crossing point at the proposed Virginia Avenue-El Chaparral facility in Tijuana, located west of the current crossing. The fourth option would maintain the current routing of southbound and northbound traffic via I-5.

In 2003, GSA initiated the preparation of an Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) in cooperation with Caltrans. A draft EIS/EIR is scheduled to be completed in fall 2006. Construction of this project is anticipated to begin in 2009 and be completed in 2013, pending the allocation of additional funding.

A concept currently under discussion by private transit operators and CBP is the implementation of Advanced Bus Manifests. This program would allow enrolled transit operators to transmit passenger travel information to CBP in advance to expedite the identification process at the POE.

\textsuperscript{5} For land border crossings, SENTRI and FAST program cards as well border crossings cards (i.e. laser visas) also are anticipated to be acceptable under this Initiative.
More frequent service for the Blue Line Trolley is planned for phased implementation in the Regional Transportation Plan (RTP). In the off-peak, frequencies would increase to 10 minutes from the current 15 minutes in 2010, and to 7.5 minutes by 2020. Peak frequencies will remain at 7.5 minutes.

Las Americas Pedestrian Bridge

In 1998, the City of San Diego Redevelopment Agency received a proposal from a private developer for the construction of a tolled crossborder pedestrian bridge west of the San Ysidro POE. The bridge is part of the International Gateway of the Americas project. It would span the Tijuana River and connect the Las Americas site (west of the southern terminus of Virginia Avenue) and an area of commercial development in north Tijuana.

The goals of the project are to decrease traffic congestion at the San Ysidro-Puerta México POE, increase pedestrian crossings through the Las Americas shopping center to promote economic growth, and establish a world-class gateway.

Two Presidential Permit applications for this project have been submitted to the U.S. Department of State (DOS) since 1999, but no approvals have been granted. A new application to U.S. DOS is anticipated in late 2006.

Transportation Improvements Serving the Otay Mesa POE

Interim State Route (SR) 905 (SR 905/Otay Mesa Road) links the Otay Mesa POE to the regional highway system. The first segment of the SR 905 extension, from the Otay Mesa POE to Airway Road, opened to traffic in September 2005. Construction of the second segment, from east of I-805 to Airway Road, is scheduled to begin in early 2007 and would take three to four years to complete. The City of San Diego is working on improvements to the southbound truck route serving the Otay Mesa Commercial POE, which are anticipated to be finalized in 2010. Cost increases, especially related to right-of-way acquisition, and funding shortfalls have delayed the completion of these projects.

Scheduled to open in early 2007, the Southbay Expressway (SR 125 Toll Road) will provide a new north-south corridor linking the border area and eastern Chula Vista to the rest of the San Diego region. This toll road is being funded through a public-private partnership.

As a result of the MTS Comprehensive Operational Analysis, improvements to bus Route 905 are scheduled to start on September 3, 2006. In particular, Route 905 will operate throughout the day with 30-minute frequencies (instead of only morning and afternoon peak periods), extending the service until 8:25 p.m. During peak periods, additional service will be provided to serve Otay Mesa business parks (Route 905A). Also, there will be new transit service on weekends every 30 minutes. The end point of bus Route 905 will be at the Iris Avenue Trolley Station, while Route 929 will provide service between the Iris Avenue Trolley Station and the San Ysidro Trolley Station. Route 929 will increase to 15-minute frequencies all day on weekdays and 30-minute service on weekends.

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6 City of San Diego Redevelopment Agency, Las Americas Pedestrian Bridge Fact Sheet, 2005.
The planned South Bay Bus Rapid Transit (BRT) will provide direct service between the Otay Mesa POE and downtown San Diego. This BRT route would travel on the South Bay Expressway, I-805, and SR 94, and would serve the developing communities in eastern Chula Vista. Service between eastern Chula Vista and downtown San Diego would be implemented in 2010, and the extension to the Otay Mesa POE is anticipated to begin operations in 2015.

Tecate POE

Upgrades to the Tecate POE were completed in 2005. Planning is underway for a new Commercial Vehicle Enforcement Facility, which is anticipated to be built by late 2008.

Federal agencies in Mexico and the United States are investigating ways to better connect the Tecate POE with the proposed Mexican Commercial Vehicle Customs Facility (700 meters to the east of the existing POE). One proposal is a 700-meter sterile corridor (fenced truck route) between both border stations, while the other is construction of a U.S. Commercial Vehicle POE directly across from the proposed Mexican facility.

Proposed East Otay Mesa-Otay II POE

Caltrans is sponsoring the development of a new border crossing at East Otay Mesa. The East Otay Mesa POE will be linked to SR 905 and the South Bay Expressway via the future SR 11. In Mexico, the Otay II border station will connect to the Tijuana-Tecate Toll Road and the Tijuana–Rosarito corridor.

In January 2006, the U.S. DOS sent the Embassy of Mexico a diplomatic note stating the interest of the U.S. federal government in the construction of a new border crossing at East Otay Mesa. A response from the Embassy of Mexico was forwarded to U.S. DOS in May 2006 indicating the Mexican government’s interest in conducting the necessary feasibility studies on both sides of the border.

The proposed East Otay Mesa POE and SR 11 are currently in the environmental phase. Caltrans will prepare a Tiered or Programmatic environmental document. The first phase will consist of a preliminary environmental document that will cover the footprint for both the POE and SR 11. This will allow for protection of the corridor and will improve the ability to compete for capital funding. The second phase would include project-level environmental documents developed separately for each portion of the project.

The cost of SR 11 is estimated to range between $230 million and $280 million. While approximately $9 million is programmed for SR 11, no additional funding sources have been identified. As noted in the Transportation Funding Revenues White Paper, certain transportation corridors—such as SR 11—may be candidates for Public Private Partnerships (PPPs), pending findings of financial feasibility studies.

In Mexico, Tijuana’s Municipal Planning Institute (Instituto Municipal de Planeación or IMPlan) coordinated the preparation of a Partial Program for the Improvement of Mesa de Otay Este (Programa Parcial de Mejoramiento de la Mesa de Otay Este), which covers the period from 2004 to 2025. This document considered the location of the future Otay II POE in Mesa de Otay Este. It also developed a circulation study to analyze three alternatives to link the proposed POE to Tijuana’s
regional transportation network. Concurrently with the preparation of the Partial Program, in August 2005, the Municipality of Tijuana issued a resolution that restricts the use of a 37-hectare parcel adjacent to the international border in Mesa de Otay Este for the future Otay II POE.

Binational coordination of planning and implementation activities for the proposed East Otay Mesa-Otay II POE and connecting roads will be accomplished through the East Otay Mesa-Otay II POE Technical Commission under the San Diego-Tijuana Border Liaison Mechanism. This Technical Commission was established in June 2006 and held its first meeting in July 2006. Staffs from U.S. Federal Highway Administration and the Mexican Secretariat of Communications and Transportation are co-chairs of this Technical Commission.

Proposed Jacumba-Jacumé POE

An additional port of entry is being considered as a long-term project east of Tecate. In 2000, SANDAG and Caltrans evaluated a future border crossing linking Jacumba, in southeastern San Diego County, and Jacumé, in the Municipality of Tecate, Mexico. The State of Baja California Secretariat of Infrastructure and Urban Development (SIDUE) also has considered this location for a future port of entry in its long-range planning work.

Representing the state governments, both Caltrans and SIDUE have made presentations on this future POE to the United States-Mexico Binational Group on Bridges and Border Crossings for the past several years. Currently, no additional planning activities are being conducted to advance the implementation of the Jacumba-Jacumé POE.

Freight Rail and Maritime Transportation

The San Diego & Arizona Eastern (SD&AE) Railway connects the San Diego region to the north via the Burlington Northern Santa Fe and Union Pacific Railways. The SD&AE also links San Diego to the Imperial Valley via the Tijuana-Tecate Railway, which is owned by Mexico, and the SD&AE Desert Line. The Desert Line was reopened to limited service in 2005. Further rehabilitation of both the Desert and Tijuana-Tecate Lines and restoration to modern service is necessary to improve the market potential of this route for international and interstate movement of goods in, out, and through the Southern California-Baja California region.

Rehabilitation of the Desert Line to modern service would likely attract companies with east-west shipping interests to locate in northern Baja California. In addition, proposals to expand facilities at the Ports of San Diego and Ensenada (Mexico) and a proposal for a new Baja California seaport and rail line at Punta Colonet (south of Ensenada) are likely to affect crossborder freight transportation. No evaluation of those potential impacts has been conducted at this time.

Crossborder Airport Terminal

Since the late 1990s, the concept of a crossborder passenger terminal has been discussed to improve access for travelers from the United States to the Tijuana International Airport. Travelers would park at a terminal to be located in the community of Otay Mesa and proceed to the Tijuana Airport via a secured walkway. This airport serves passenger and cargo with routes to major cities in Mexico.

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7 Secretaría de Desarrollo Urbano and IMPlan, Programa Parcial de Mejoramiento de la Mesa de Otay Este, en la ciudad de Tijuana, Baja California, 2005
8 XVIII Ayuntamiento de Tijuana, Declaratoria de Destino para la Localización del Puerto Fronterizo Otay II, 2005
In 1998, the South County Economic Development Council conducted a study that concluded that a crossborder terminal would reduce vehicular congestion at the San Ysidro and Otay Mesa POEs by as much as three percent. According to the study, direct foreign flights would increase the economic activity along the Otay Mesa-Tijuana corridor and extend the operational life of the San Diego International Airport. Surveys conducted at the Tijuana airport for this study estimated that 1.09 million annual passengers originate from Southern California.

In December 2005, the possibility of the crossborder terminal was discussed with Mexican government officials during a trade mission to Mexico City arranged by the San Diego Regional Chamber of Commerce’s Mexico Business Center. In July 2006, the San Diego County Regional Airport Authority’s Board accepted its Strategic Planning Committee recommendation to develop a scope of work for a crossborder terminal development with participation from other stakeholder agencies, including the operator of the Tijuana International Airport. The scope of work and cost estimate are anticipated to be presented to the Authority’s Board in September 2006 for action. Following approval from the Authority’s Board, staff would seek funding from the Federal Aviation Administration.

**Issues and Policy Implications**

As described earlier in this paper, several projects to add crossborder travel capacity or improve operations are under development or have been proposed as future solutions. The following are the primary challenges for timely project implementation:

- Shortfalls of traditional funding sources for POE infrastructure and operations as well as for transportation facilities serving POEs.
- Binational coordination and collaboration is required with a myriad of local, regional, state, and federal agencies in the United States and Mexico.
- Lack of clear understanding among governmental agencies on how each agency’s project priorities are established.

In addition, development pressure and rapid growth in border communities conflict with the long lead-time for project implementation and can preclude crossborder transportation improvements as land develops for other uses. For example, vacant land available in Tijuana for the future Otay II border crossing has been urbanized over the years. Understanding this situation, the Municipality of Tijuana has taken steps to restrict the use of the only vacant area adjacent to the international border for the proposed Otay II POE.

The challenges outlined above can lead to opportunities to work with policymakers to advance transportation projects, with the goal of reducing congestion and crossborder delay while enhancing security and improving the economy. As described in the Transportation Funding Revenues White Paper, it will be important for the San Diego region to be an active participant as enabling state or federal legislation is drafted to implement PPPs or public tolled facilities.

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10 San Diego County Regional Airport Authority, Authority Board Meeting, July 24, 2006.
RECOMMENDATIONS

For RTP Update

It is recommended that the RTP consider projected growth in northern Baja California and the San Diego region, in conjunction with the crossborder projects described in this paper, to evaluate future crossborder travel demand.

Also, it is recommended that a financial feasibility assessment of SR 11 and the East Otay Mesa POE be conducted to evaluate the viability of using tolls and/or fees to establish a revenue stream that would cover the overall project costs, including the ability of the project to attract capital (debt or private equity) at a reasonable cost.

For Future Analysis

As proposals for maritime and freight rail projects move forward in the Southern California-Baja California region, an evaluation of the implications for crossborder freight movements at the California-Baja California POEs is recommended to be undertaken, as well as an analysis of the potential use of rail for crossborder passenger service.

It is recommended that SANDAG monitor developments related to the proposed crossborder airport terminal, in the context of airport planning activities in the region.

Also, it is recommended that DHS explore and implement state-of-the-art technologies and processes at the POEs to achieve the dual goals of facilitating the crossborder movement of people and goods, while securing the international border (e.g., stacked booths, all lanes SENTRI-compatible, and electronic seals for cargo containers). These processes should include contingency plans developed in partnership with agencies in Mexico in case of emergency situations at the POEs. Expansion of effective programs such as FAST and SENTRI to include additional lanes for trucks, buses, and private vehicles, as well as dedicated lanes for pedestrians and bicycles also should be considered.

In addition, it is recommended that economic impacts due to delays at the San Diego-Baja California region POEs be estimated periodically as new border crossing and wait time data becomes available.
DOCUMENTO DE TRANSPORTE TRANSFRONTERIZO

ANTECEDENTES

Durante años, las estaciones de radio y televisión han transmitido informes de tránsito sobre las vialidades importantes en la región de San Diego. Sin embargo, fue hasta años recientes que dichos informes de tránsito comenzaron a transmitir información sobre el número de vehículos y peatones en espera para cruzar en los cruces fronterizos de Tijuana-San Diego.

Todos los días, aproximadamente 68,000 vehículos de pasajeros y 30,000 peatones viajan desde México a través de las garitas de entrada (GsDE) de San Ysidro, Otay Mesa y Tecate. Más de 2,500 tractocamiones en dirección hacia el norte también cruzan la frontera en Otay Mesa y Tecate de manera cotidiana. Se estima que una cantidad similar de cruces fronterizos se dirigen hacia el sur.

Las regiones fronterizas enfrentan el reto de equilibrar la seguridad con el movimiento eficiente de personas y bienes a través de las GDE internacionales. Con el paso del tiempo, las demoras en la frontera han aumentado y se han tornado impredecibles. Dichas demoras – particularmente en dirección hacia el norte – son el resultado del crecimiento en el número de viajes transfronterizos, a que la infraestructura de transporte no se ha mantenido a la par con dicho crecimiento y a la implementación de revisiones de seguridad más estrictas.

Objetivos para el Plan Regional de Transporte (RTP, por sus siglas en inglés) 2007

Los objetivos del Documento de Transporte Transfronterizo del RTP 2007 son tres:
1. Evaluar las condiciones actuales de los viajes transfronterizos.
2. Identificar las necesidades actuales y futuras de transporte multimodal que agilicen los viajes transfronterizos, con base en una evaluación del crecimiento proyectado para la región fronteriza San Diego-Tijuana.
3. Evaluar potenciales fuentes de financiamiento, tradicionales e innovadoras, para facilitar la implementación de infraestructura de transporte y de garitas de entrada.

Antecedentes

Garitas de Entrada en la Región San Diego-Baja California: Condiciones Actuales

Son tres las GsDE que conectan la región de San Diego y Baja California. El cruce fronterizo San Ysidro-Puerta México da servicio a vehículos de pasajeros y peatones, mientras que las GDE Otay Mesa-Mesa de Otay y Tecate-Tecate dan servicio a vehículos de pasajeros, peatones y vehículos comerciales. Las inspecciones ferroviarias se realizan en el patio ferroviario de San Ysidro. La Figura 1 muestra la región fronteriza y las tres GDE.

San Ysidro-Puerta México

La GDE de San Ysidro es el cruce fronterizo de pasajeros más transitado en la frontera México-Estados Unidos. De hecho, se le considera como la garita de entrada terrestre más transitada en el mundo. Opera las 24 horas del día, siete días de la semana, representado aproximadamente el 70 por ciento de los cruces vehiculares y más del 80 por ciento de las personas que cruzan a pie a la región de San Diego.
Figura 1
Garitas de Entrada San Diego-Baja California
Cuatro de los 24 carriles de inspección primaria vehicular en la GDE de San Ysidro pueden ser usados como carriles exclusivos para viajeros SENTRI\(^1\), en donde los viajeros y vehículos que han sido aprobados, después de la verificación de antecedentes e inspecciones, cruzan la frontera en forma más rápida. Los carriles vehiculares SENTRI operan de las 4 a.m. a la medianoche siete días de la semana. Una instalación peatonal independiente da servicio a las personas que cruzan a pie. Desde septiembre de 2004 existe también un carril peatonal SENTRI como programa piloto, que opera durante las horas pico de cruce (de las 5 a las 9 a.m. y de las 3 a las 7 p.m.) entre semana.

Las instalaciones para cruce peatonal dan servicio también a ciclistas. Después de un aumento importante en viajeros que cruzan la frontera en bicicleta, posterior al 11/9, CBP permitió que los ciclistas fueran procesados con prioridad a los demás peatones en la línea. Sin embargo, este proceso agilizado se concluyó en mayo de 2006, porque de acuerdo a CBP, algunos viajeros transfronterizos rentaban bicicletas justo antes del cruce solo para adelantarse en la línea peatonal.\(^2\)

Para atender a los ciclistas transfronterizos que continúan su viaje en otros modos, Caltrans construyó una pequeña instalación que cuenta con anaqueles para colocar unas 15 bicicletas al oeste de la Interestatal 5 (I-5) (en Camiones Way). Una segunda instalación para colocar bicicletas se localizará al este de la I-5 (en San Ysidro Boulevard adjunto a la entrada a la carretera I-5/San Ysidro Boulevard), la cual permitirá estacionar aproximadamente 115 bicicletas y se espera que se haya construido en la primavera de 2007.

El Centro de Transporte Intermodal de San Ysidro, concluido en el 2005 y adyacente a la GDE de San Ysidro, mejora el acceso peatonal a la Línea Azul del Trolley, a camiones suburbanos, taxis, autobuses y otras unidades de transporte (shuttles). Se estima que más de 28,000 personas tienen acceso diario a los servicios de transporte público en este lugar.

**Otay Mesa-Mesa de Otay**

La GDE de Otay Mesa es el cruce comercial fronterizo más transitado en la frontera México-California. De todas las GsDE comerciales México-Estados Unidos, Mesa de Otay-Otay Mesa es la tercera más importante en cuanto al valor comercial, después de las GsDE de Laredo y El Paso, Texas. En el 2005, la estación fronteriza Otay Mesa-Mesa de Otay procesó $24.4 mil millones de dólares de mercancía en ambos sentidos, transportados en más de 1.4 millones de camiones. El horario de operación de cruce comercial hacia San Diego (camiones cargados) es de las 6 a.m. a las 8 p.m. únicamente en días de semana.

En el 2005, el programa Free and Secure Trade (FAST) empezó a operar en la GDE de Otay Mesa. FAST es un proceso comercial que se ofrece a importadores, transportistas y conductores registrados, previamente aprobados, que resulta en un cruce de la frontera más ágil.

Desde el 2003, las instalaciones para revisión de pasajeros operan las 24 horas del día, los siete días de la semana y procesan aproximadamente una cuarta parte del total de cruces de vehículos de pasajeros y camiones en dirección hacia el norte. Otay Mesa cuenta con un total de 14 líneas para revisión de vehículos de pasajeros. Un carril es dedicado a SENTRI, el cual que opera de las 5 a.m. a las 8 p.m., siete días a la semana. Las personas que cruzan a pie se procesan en una instalación peatonal independiente.

El Sistema Metropolitano de Tránsito (MTS) opera la Ruta de Autobús 905 entre la GDE de Otay Mesa y las Estaciones Iris y San Ysidro del Trolley, cada 30 minutos entre semana durante los períodos pico por la

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\(^2\) Antes de 9/11 (11/9), se hace la revisión de los ciclistas en las casetas de inspección primarias para los carriles SENTRI actuales. Sin embargo, a partir de esa fecha, la CBP ha cambiado a todos los ciclistas a la instalación peatonal por cuestión de seguridad.
mañana y por la tarde. El servicio inicia a las 4:50 a.m. y concluye a las 7 p.m. Sin embargo, no hay servicio entre las 10 a.m. y la 1 p.m. En el 2005, casi 44,100 pasajeros viajaron en la Ruta MTS 905.

Tecate-Tecate

La GDE de Tecate es la más pequeña de los tres cruces terrestres fronterizos en la región San Diego-Baja California. La instalación de revisión de pasajeros opera siete días a la semana entre las 5 a.m. y las 11 p.m. con dos carriles de revisión Para vehículos de pasajeros. La estación fronteriza también maneja vehículos comerciales. Los camiones con carga que se dirigen hacia el norte se procesan de las 8 a.m. a las 4 p.m. todos los días entre semana.

Las figuras 2 y 3 muestran los datos del cruce fronterizo en sentido norte en las tres GsDE para peatones y vehículos de pasajeros, incluyendo autobuses. La figura 4 muestra los cruces de tractocamiones hacia el norte, así como el comercio México – EE.UU. por camión a través las GsDE comerciales de Otay Mesa y Tecate.

![Figura 2: Cruces Peatonales Hacia el Norte](image)

Fuentes: Aduanas y Protección Fronteriza de EE.UU., Oficina de Operaciones de Campo. Datos representan el año fiscal federal.
Figura 3
Cruces de Vehículos de Pasajero y de Camión hacia el Norte


Figura 4
Cruces de Camión hacia el Norte e Intercambio Comercial de Camiones en ambos sentidos por las GDE de Otay Mesa y Tecate

Identificación de Problemas

A pesar del importante crecimiento de las operaciones comerciales en las GsDE de Otay Mesa-Mesa de Otay y Tecate-Tecate y de los vínculos sociales y económicos que existen entre la región de San Diego y Baja California, pocas son las mejoras a la infraestructura de cruces fronterizos que se han implementado en la frontera durante los últimos 20 años. El proyectado aumento poblacional y el crecimiento continuo en el intercambio comercial resultarán en mayores demandas sobre la infraestructura existente.

En un día típico, aproximadamente 160,000 personas cruzan por la frontera de México hacia la región de San Diego usando vehículos privados, camiones o a pie. Se anticipa que los volúmenes actuales (2005) del tránsito vehicular transfronterizo se duplicarán para el año 2030.

El aumento en el congestionamiento y las demoras de los movimientos de carga y viajes personales transfronterizos se han tornado más impredecibles. Se estima que dichas demoras representaron un costo a las economías de San Diego y Baja California de casi $4.2 mil millones de dólares en pérdida de productividad y una pérdida de más de 35,000 empleos en el año 2005. Se proyecta que tanto la pérdida de productividad como la de empleos, por lo menos se duplique en los próximos diez años, si no se toman las medidas necesarias para mejorar los cruces fronterizos, la infraestructura y el manejo del transporte. La calidad del aire en la frontera también es impactada por los tractocamiones y vehículos privados cuyos motores operan sin desplazarse.

Mientras que la misión de U.S. Customs and Border Protection (CBP) es la seguridad nacional, una de las metas estratégicas de CBP es “agilizar el movimiento eficiente de carga legítimo y de personas.” CBP ha implementado programas tales como SENTRI y FAST para agilizar los cruces fronterizos a participantes previamente evaluados. Operan un máximo de cuatro carriles vehiculares y uno peatonal SENTRI en San Ysidro y funciona un carril vehicular SENTRI en Otay Mesa, pero hasta dichos carriles padecen de congestionamiento durante horas pico. Para lograr las metas de CBP se requerirá de enfoques innovadores en el manejo de la infraestructura actual de las GsDE, así como del desarrollo y operación de nuevos cruces fronterizos.

También se requiere mejor acceso intermodal para peatones. No hay forma de recoger a peatones que cruzan de México hacia EE.UU. de manera conveniente, ya que no existen espacios para estacionamiento de corto tiempo en el área de las GsDE de San Ysidro y Otay Mesa. Por otro lado, a diferencia de la Línea Azul del Trolley en San Ysidro, la parada de la Ruta MTS 905 no se encuentra adyacente a las instalaciones de revisión de la GDE de Otay Mesa.

El desarrollo de nuevos cruces fronterizos y las vialidades de acceso o mejoras a los mismos, es más complejo que implementar proyectos de transporte dentro de la región de San Diego. Además de compartir rezagos presupuestales similares, los proyectos de las GsDE requieren coordinación estrecha y colaboración con dependencias de gobierno en ambos lados de la frontera internacional a niveles federal, estatal, regional y municipal. El desarrollo de estos proyectos incluye las estaciones fronterizas en cada país, así como las vialidades que conectan dichas estaciones fronterizas con la red de transporte regional. Varias entidades son responsables de distintas actividades de planificación, aprobación e implementación en los Estados Unidos y México, lo cual resulta en tiempos más largos para terminación de dichos los proyectos.

Cabe mencionar que también existe inquietud en la comunidad en relación a los posibles impactos de la implementación del programa US-VISIT en el tránsito vehicular con dirección hacia el sur, y que provoque congestiones en las Interestatales 5 y 805 y conectores locales en San Ysidro. Además, la Iniciativa de

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Viaje en el Hemisferio Occidental (WHTI, por sus siglas en inglés) requerirá que los ciudadanos estadounidenses, mexicanos y canadienses que ingresen o regresen a los Estados Unidos por medio de GsDE terrestres porten un pasaporte válido partir del 1 de enero de 2008.5

Tanto las GsDE terrestres como las carreteras regionales de acceso son un componente integral de corredores de intercambio comercial internacional y nacional. En virtud de que los beneficios del intercambio comercial se reflejan más allá de la región de San Diego, a todo el estado de California y EE.UU., es vital garantizar los recursos estatales y federales necesarios para mejorar dicha infraestructura de los corredores comerciales.

**DIALOGO**

**Potenciales Soluciones/Alternativas**

Como se describe en esta sección, existen varios proyectos para mejorar la capacidad y seguridad de viaje que están en diversas etapas de planificación e implementación, sin embargo, la mayoría de estos solo cuentan con fondos limitados para su implementación.

El Departamento de Seguridad Nacional de EE.UU. empezó la implementación del programa US-VISIT, el cual resultará en un sistema automatizado de entradas y salidas para viajeros transfronterizos en las GsDE terrestre. Para su operación y para optimizar las revisiones de seguridad de personas, vehículos e intercambio comercial en las GDE, será esencial incorporar tecnologías inteligentes en la frontera, de forma que se agilicen los viajes transfronterizos y se fortalezca la seguridad en la frontera.

**GDE Terrestres, Carreteras y Tránsito**

Realineamiento de la GDE de San Ysidro

La Administración General de Servicios de EE.UU. (U.S. General Service Administration, GSA) está a cargo de un proyecto para mejorar y ampliar la estación fronteriza de San Ysidro y fortalecer la eficiencia, integridad y seguridad de las dependencias federales y los viajeros transfronterizos. En el 2002 la GSA preparó un Estudio de Factibilidad, mismo que consideró cuatro opciones de ampliación, incluyendo la redistribución de instalaciones y de las rutas de tránsito norte-sur. Tres de las cuatro opciones se diseñaron de forma tal que el punto de cruce hacia el sur pueda ser por las instalaciones propuestas en la Ave. Virginia -El Chaparral, situadas al oeste del cruce actual. La cuarta opción mantiene las rutas actuales de tránsito hacia el norte y hacia el sur por la carretera I-5.

En el 2003 la GSA inició la elaboración de una Declaración de Impacto Ambiental (EIS)/Reporte de Impacto Ambiental (IER) en colaboración con Caltrans. Se tiene programado contar con el borrador del EIS/EIR en otoño de 2006. La construcción de dicho proyecto se tiene programada iniciar en el 2009 y concluir en el 2013, a reserva de que se consiga financiamiento adicional.

Un concepto actualmente bajo discusión por parte de operadores privados de transporte público y CBP es la implementación de Manifiestos Avanzados de Autobuses. Dicho programa permitiría a los operadores de tránsito transmitir información sobre el viaje de los pasajeros a CBP por adelantado, para de esta forma agilizar el proceso de identificación en la GDE.

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5 Para cruces fronterizos terrestres, se prevé que las credenciales de los programas SENTRI y FAST así como micas (i.e. visas laser) también sean aceptables bajo esta iniciativa.
El Plan de Transportación Regional (RTP) contempla la implementación en fases de un servicio más frecuente para la Línea Azul del Trolley fuera de horarios pico, la frecuencia aumentaría en el 2010 de los actuales 15 minutos a cada 10 minutos y a cada 7.5 minutos en el 2020. La frecuencia durante el período pico continuaría siendo cada 7.5 minutos.

Puente Peatonal Las Américas

En 1998, la Agencia de Re-desarrollo de la Ciudad de San Diego recibió una propuesta de parte de un desarrollador privado para la construcción de un puente peatonal transfronterizo de cuota al oeste de la GDE de San Ysidro. El puente es parte del proyecto Internacional Gateway of the Américas, que cruzaría la canalización del Río Tijuana y conectaría los terrenos de Las Américas (al extremo oeste de la Ave. Virginia) con el área de desarrollo comercial al norte de Tijuana.

De acuerdo al proyecto, las metas de éste son reducir el congestionamiento vial en la GDE San Ysidro-Puerta México, incrementar los cruces fronterizos vía el centro comercial de Las Américas para promover crecimiento económico y establecer un cruce de clase mundial.

Desde 1999 se han entregado dos solicitudes para Permisos Presidenciales para este proyecto al Departamento de Estado de EE.UU. (DOS), aunque aún no se ha otorgado aprobación alguna. Se prevé una nueva solicitud al DOS a finales de 2006.

Mejoras al Sistema de Transporte que da servicio a la GDE de Otay Mesa

La Ruta Estatal interina (SR) 905 (SR 905/Otay Mesa Road) vincula a la GDE de Otay Mesa con el sistema regional de carreteras. El primer segmento de la extensión SR 905, que comprende de la GDE de Otay Mesa a Airway Road, se abrió al tránsito en septiembre de 2005. Se tiene programado iniciar la construcción del segundo segmento, desde el este de la I-805 hasta Airway Road, a inicios de 2007 y se tardaría de tres a cuatro años en concluir. La Ciudad de San Diego está trabajando en mejoras a la ruta para camiones de exportación hacia el sur misma que da servicio a la GDE Comercial de Otay Mesa y que se espera finalizarse en el 2010. El aumento en costos, particularmente los de adquisición de derechos de vía, así como los rezagos presupuestales, han demorado la terminación de dichos proyectos.

El Southbay Expressway (SR 125 Toll Road), cuya apertura está programada a principios de 2007, será otro corredor norte-sur que conectará al área fronteriza y la parte este de Chula Vista con el resto de la región de San Diego. Esta nueva carretera de cuota es financiada a través de una alianza pública-privada.

Como resultado del Análisis Operativo Completo de MTS (MTS Comprehensive Operational Analysis), se tiene programado iniciar mejoras a la Ruta de Autobús 905 a partir del 3 de septiembre de 2006. En particular, la Ruta 905 operará durante el día con frecuencia de cada 30 minutos (en vez de limitarse solo a períodos pico durante la mañana y tarde), ampliando el servicio hasta las 8:25 p.m. Durante períodos pico, se ofrecerá un servicio adicional para dar servicio a los parques industriales del área de Otay Mesa (Ruta 905A). También habrá nuevo servicio de transporte público cada 30 minutos los fines de semana. El punto final de la Ruta de Autobús 905 será la Estación de Trolley de Iris Avenue, mientras que la Ruta 929 ofrecerá servicio entre la Estación de Trolley de Iris Avenue y la Estación de Trolley de San Ysidro. La Ruta 929 aumentará la frecuencia del servicio a cada 15 minutos durante todo el día entre semana y a 30 minutos los fines de semana.

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6 City of San Diego Redevelopment Agency, Las Americas Pedestrian Bridge Fact Sheet, 2005.
El Transporte Rápido de Autobuses de South Bay (South Bay Bus Rapid Transit, BRT) brindará servicio directo entre la GDE de Otay Mesa y el centro de San Diego. Esta Ruta BRT viajaría por la carretera South Bay Expressway, la I-805 y la SR 94, dando servicio a los desarrollos y comunidades del este de Chula Vista. El servicio desde el este de Chula Vista al centro de San Diego iniciará en e 2010 y la extensión a la GDE de Otay Mesa se prevé para el 2015.

GDE de Tecate

Las mejoras a la GDE de Tecate se completaron en el 2005. Se hacen planes para una nueva Instalación de Revisión para Vehículos Comerciales, cuya construcción se prevé finalice en el 2008.

Las dependencias federales en México y los Estados Unidos están explorando formas para mejorar la conexión de la GDE de Tecate con la instalación aduanal de vehículos comerciales en México (700 metros al este de la actual GDE). Una de las propuestas es un corredor fiscal de 700 metros (ruta bardeada para camiones) entre ambas estaciones fronterizas, mientras que otra propone la construcción de una nueva GDE para vehículos comerciales de EE.UU. directamente al frente de la instalación mexicana en proyecto.

Propuesta de la GDE East Otay Mesa-Otay II

Caltrans encabeza los trabajos para el desarrollo de un nuevo cruce fronterizo al este de Otay Mesa. La GDE de East Otay Mesa estará conectada a la SR 905 y al South Bay Expressway por medio de la SR 11. En México, la estación fronteriza Otay II tendrá acceso por la Carretera de Cuota Tijuana-Tecate y el corredor Tijuana-Rosarito.

La propuesta GDE East Otay Mesa y la SR 11 actualmente están en la fase de análisis ecológico. Caltrans prepara un documento ambiental en fases o programático. La primera fase consistirá en un documento preliminar de medio ambiente que comprenderá el espacio de la ruta SR 11 y la propuesta GDE. Con ello se protegerá el corredor y mejorará la capacidad para competir por financiamiento federal. La segunda fase incluiría documentos ambientales a nivel proyecto, desarrollados independientemente para cada una de las partes del mismo.

Se estima que el costo de la SR 11 será entre $230 millones y $280 millones de dólares. Aunque ya se tienen programados aproximadamente $9 millones de dólares para la SR 11, no se han identificado fuentes adicionales de financiamiento. El documento de investigación sobre Ingresos para Financiar al Transporte, identifica a ciertos corredores – tales como la SR 11 – que podrán ser candidatos para ser financiados por Alianzas Público-Privadas (Public Private Partnerships, PPPs), a reserva de los resultados que arrojen los estudios de factibilidad financiera.

En México, el Instituto Municipal de Planeación de Tijuana, IMPlan, coordinó la elaboración de un Programa Parcial para Mejoramiento de la Mesa de Otay Este que cubre el período de 2004 a 2025. Dicho documento consideró la ubicación de la futura GDE Otay II en la Mesa de Otay Este. También desarrolló un estudio de circulación para analizar las tres alternativas para conectar la propuesta GDE a la red de transporte regional de Tijuana.7 A la par de la preparación del Programa Parcial, en agosto de 2005, el Municipio de Tijuana otorgó una resolución que restringe el uso de una parcela de 37 hectáreas adyacente a la frontera internacional en Mesa de Otay Este para la futura GDE Otay II.8

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7 Secretaría de Desarrollo Urbano e IMPlan, Programa Parcial de Mejoramiento de la Mesa de Otay Este, en la ciudad de Tijuana, Baja California, 2005.
8 XVIII Ayuntamiento de Tijuana, Declaratoria de Destino para la Localización del Puerto Fronterizo Otay II, 2005.
La coordinación binacional de actividades de planificación e implementación para la GDE Otay Mesa East – Otay II y las vialidades de acceso se logrará a través de la Comisión Técnica de la propuesta GDE Otay Mesa East – Otay II en el marco del Mecanismo de Enlace Fronterizo San Diego-Tijuana. La Comisión Técnica fue establecida en junio de 2006 y llevó a cabo su primera reunión en julio de 2006. Personal de la Administración Federal de Carreteras de EE.UU. y de la Secretaría de Comunicación y Transportación de México copresiden de esta Comisión Técnica.

GDE Propuesta para Jacumba-Jacumé

Está en consideración una garita de entrada adicional, como proyecto a largo plazo, al este de Tecate. En el 2000, SANDAG y Caltrans evaluaron un futuro cruce fronterizo que conecta Jacumba, al sudeste del Condado de San Diego, con Jacumé, en el Municipio de Tecate, México. La Secretaría de Infraestructura y de Desarrollo Urbano (SIDUE) del Estado de Baja California también ha considerado este sitio para una futura garita de entrada un su trabajo de planificación a largo plazo.

Representando a los gobiernos estatales, tanto Caltrans como SIDUE han realizado presentaciones sobre dicha propuesta al Grupo Binacional de Puentes y Cruces Fronterizos México-Estados Unidos durante los últimos años. Actualmente, no se están realizando actividades de planificación adicional para promover la implementación de la GDE Jacumba-Jacumé.

Transportación Marítima y Ferroviaria de Carga

El ferrocarril San Diego & Arizona Eastern (SD&AE) Railway conecta a la región de San Diego hacia el norte, a través de las ferrovías de Burlington Northern Santa Fe y de Union Pacific. El SD&AE también conecta a San Diego con el Valle Imperial por medio de la Ruta Corta Tijuana-Tecate, propiedad de México y la Línea del Desierto (SD&AE Desert Line). La Línea del Desierto fue reinaugurada para dar servicio limitado en el 2005. Sin embargo, para mejorar el potencial de mercado de esta ruta es necesario hacer mejoras adicionales, tanto la Línea del Desierto, como al segmento Tijuana-Tecate y así proporcionar un servicio moderno, necesario para el movimiento de bienes internacional e interestatal entrando, saliendo y atravesando la región del Sur de California-Baja California.

La rehabilitación de la Línea del Desierto, con un nivel de servicio moderno, muy probablemente atraería a empresas con interés en el transporte de carga marítima este-oeste, para que se ubiquen en el norte de Baja California. Adicionalmente, existen propuestas para ampliar las instalaciones en los Puertos de San Diego y Ensenada (México), además de una propuesta para un nuevo puerto marítimo en Baja California y una ruta de ferrocarril en Punta Colonet (al sur de Ensenada) que probablemente tendrán un impacto en el transporte de carga transfronteriza. Actualmente no se han evaluado dichos impactos potenciales.

Terminal de Aeropuerto Transfronteriza

Desde finales de 1990s, el concepto de una terminal de pasajeros transfronteriza se ha considerado para mejorar el acceso de viajeros de los Estados Unidos al Aeropuerto Internacional de Tijuana. Los viajeros se estacionarían en una terminal de pasajeros situada en la comunidad de Otay Mesa (Estados Unidos) y procederían al Aeropuerto de Tijuana a través de un conducto peatonal seguro. Dicho aeropuerto da servicio a pasajeros y carga con rutas a las principales ciudades de México.

En 1998, el Consejo de Desarrollo Económico del Sur del Condado de San Diego llevó a cabo un estudio que concluyó que una terminal transfronteriza reduciría el congestionamiento vehicular en las GDE en San Ysidro y Otay Mesa en cerca del tres por ciento. Según el estudio, la existencia de vuelos del extranjero

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directos incrementaría la actividad económica a lo largo del corredor Otay Mesa-Tijuana, al tiempo que ampliaría la vida operativa del Aeropuerto Internacional de San Diego. Las encuestas realizadas en el aeropuerto de Tijuana para dicho estudio estimaron que 1.09 millones de pasajeros anuales se originan en el sur de California.

En diciembre de 2005, una delegación comercial coordinada por la Cámara de Comercio Regional de San Diego y su Centro de Negocios con México, en visita a la ciudad de México, discutió la posibilidad de una terminal de pasajeros transfronteriza con funcionarios de gobierno mexicano de ese país. En julio de 2006, el Consejo del San Diego County Regional Airport Authority aceptó la recomendación de su Comité de Planeación Estratégica para elaborar un programa de trabajo tendiente a desarrollar una terminal de pasajeros transfronteriza con la participación de otras dependencias interesadas, incluyendo al operador del Aeropuerto Internacional de Tijuana. Se prevé que el programa de trabajo y el estimado de costos se presente al Consejo de la Autoridad en septiembre de 2006 para su consideración. Dependiendo de la aprobación por parte del Consejo de la Autoridad, el personal buscaría financiamiento de parte de la Administración Federal de Aviación de Estados Unidos.10

**Temas e Implicaciones de Políticas**

Como fue descrito anteriormente en este documento, varios proyectos que mejorarían o ampliarían la capacidad para viajes transfronterizos se encuentran ya en desarrollo o han sido propuestos como posibles soluciones. A continuación se especifican los principales retos para la implementación oportuna de dichos proyectos:

- Rezagos en cuanto a fuentes tradicionales de financiamiento para la infraestructura y operación de GsDE, así como para instalaciones de transporte que dan servicio a las GsDE.
- Se requiere la coordinación y colaboración binacional entre diversas dependencias locales, regionales, estatales y federales en EE.UU. y México.
- Falta un entendimiento claro entre dependencias de gobierno sobre la forma en que éstas establecen sus prioridades de proyectos.

Adicionalmente, la presión del desarrollo y el rápido crecimiento de las comunidades fronterizas se contraponen al prolongado tiempo que se requiere para implementar los proyectos. Esto puede evitar que se hagan mejoras en el transporte transfronterizo, pues permite que algunos terrenos cambien su uso de suelo, como es el caso de los terrenos vacantes disponibles en Tijuana para el cruce fronterizo futuro Otay II, que se han urbanizado con el paso de los años. Entendiendo dicha situación, el Municipio de Tijuana llevó a cabo las medidas para restringir el uso de suelo de la única área vacante adyacente a la frontera internacional para la GDE propuesta Otay II.

Los retos señalados con anterioridad pueden generar oportunidades para colaborar con quienes están a cargo de la formulación de políticas que permitan avanzar en proyectos de transporte, con la meta de reducir el congestionamiento y las demoras en la frontera, al tiempo que se mejoran las condiciones de seguridad y de la economía. Como lo señala el documento sobre Ingresos para Financiar al Transporte, será importante que la región de San Diego sea un participante activo en los trabajos tendientes a redactar una legislación federal o estatal que permita las Alianzas Público-Privado o implementar instalaciones públicas de cuota.

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10 San Diego County Regional Airport Authority, Reunión del Consejo, 34 de julio de 2006.
RECOMENDACIONES

Para la Actualización del Plan Regional de Transporte (PRT)

Se recomienda que el PRT considere el crecimiento proyectado para el norte de Baja California y la región de San Diego, en conjunto con los proyectos transfronterizos descritos en este documento, para evaluar la futura demanda de viajes transfronterizos.

También, se recomienda que se efectúe una evaluación de factibilidad financiera de la SR 11 y la GDE de East Otay Mesa, para evaluar la viabilidad de utilizar cuotas y/o cobros como fuente de ingresos que cubra el costo general del proyecto, incluyendo la capacidad para atraer capital (deuda o inversión privada) a un costo razonable.

Para Análisis Futuro

Se recomienda que conforme avancen las propuestas de proyectos ferroviarios de carga y marítimos en la región del Sur de California – Baja California, se realice una evaluación de las implicaciones para movimientos de carga transfronteriza en las GDE de California-Baja California, así como un análisis del uso potencial del ferrocarril para dar servicio a viajeros transfronterizos.

Se recomienda que, en el contexto de las actividades de planeación aeroportuaria en la región, SANDAG monitoree el desarrollo relativo a la propuesta de una terminal de pasajeros aeroportuaria transfronteriza.

Además, se recomienda que DHS explore e implemente el uso de tecnologías y procesos vanguardistas en las GDE para que logren la doble meta de agilizar el movimiento transfronterizo de personas y bienes, al tiempo que se mantiene la seguridad en la frontera internacional (por ejemplo, implementar unidades de inspección dobles, que todas las líneas sean compatible con SENTRI y sellos electrónicos para los contenedores de carga). Dichos procesos deberán incluir planes de contingencia desarrollados en conjunto con dependencias en México para situaciones de emergencias en las GsDE. También debe ser considerada la posibilidad de ampliar programas que han resultado efectivos, como el FAST y SENTRI, para incluir carriles adicionales para camiones, autobuses y vehículos privados, así como carriles exclusivos para peatones y bicicletas.

Además, se recomienda que los impactos económicos debidos a las demoras en las GsDE en la región de San Diego-Baja California, sean estimados periódicamente conforme nuevos datos sobre cruce fronterizos o tiempos espera estén disponibles.
Campo Kumeyaay Nation

Water management planning

Location of the Campo Indian Reservation

Southeast San Diego County
25 square miles
Elevation 2800-4600 feet
Hydrogeology of the Reservation

The geology of the Reservation is dominated by three geologic structures:

- Fractured Bedrock
- Decomposed Granite
- Sandy Alluvium
County Groundwater Model

Precipitation → Evapotranspiration → Transpiration → Evaporation

Percussion → Lake → Land → Return → Ocean

Groundwater flow

Courtesy Erich Haecher, War Planck Institute for Meteorology
### Basic Assumptions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>SM cap. inches</td>
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</tr>
<tr>
<td>runoff</td>
<td>0.3</td>
</tr>
<tr>
<td>storage percent</td>
<td>5.00</td>
</tr>
<tr>
<td>aq area acres</td>
<td>350,000</td>
</tr>
<tr>
<td>aq_depth feet</td>
<td>30,000</td>
</tr>
<tr>
<td>capacity Ac-ft</td>
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</tr>
<tr>
<td>ext. rate Ac/yr</td>
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</tr>
<tr>
<td>min vol</td>
<td>97.65</td>
</tr>
<tr>
<td>driest condition</td>
<td>1976</td>
</tr>
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</table>

### Calculations

| Month       | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | recharge | pct of ppt | acre-feet | remaining | aquifer |
|-------------|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|------------|-----------|-----------|----------|--------|
|             | 0.17 | 0.47| 1.87 | 1.01| 1.00| 1.00| 0.47| 1.00| 1.00| 0.87| 1.00| 0.42| 1.00    | 0.52       | 1.00      | 0.42      | 1.00     |

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 Campo Wetland: a work in progress
The County Groundwater Model

Results

Long-term Water Balance, Example Basin Drainage
617 Acres, 40.29 gpm (24 hr/day)

![Graph showing Ac-ft in aquifer over years since 1900]

Years, since 1900

0 20 40 60 80 100 120

Ac-ft in aquifer

0 50 100 150 200 250 300

Recharge, as pct of precipitation

![Graph showing recharge as a percentage of total precipitation over years]

Year

1880 1900 1920 1940 1960 1980 2000 2020

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60

Recharge, as pct of precipitation
Aquifer usage

- Water companies
- Agriculture
- Cattle grazing
- Invasive species
- Recreation
- Human consumption
- Injection wells (septic systems)

U.S. Water law & policy

- Surface water is separate from groundwater
- Water quality and water quantity are separate issues
Campo Wetland: a work in progress
Campo Creek Basin Side by Side
At 10 acre/household
\[ \approx 250 \text{ homes using 125 acre-ft/year potential} \]

On Reservation
Acres- 2202
87%

<table>
<thead>
<tr>
<th>Usage</th>
<th>Acre-Ft/yr</th>
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</thead>
<tbody>
<tr>
<td>5 Homes</td>
<td>2.5</td>
</tr>
<tr>
<td>Casino</td>
<td>40</td>
</tr>
</tbody>
</table>

If Campo grew 40 acres of alfalfa - 120-200 a-f/yr

Off Reservation
Acres – 330
13%

<table>
<thead>
<tr>
<th>Usage</th>
<th>Acre-Ft/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>62 Homes</td>
<td>31</td>
</tr>
<tr>
<td>½ acre Lake</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Company-
?

If Company had supplied turbines 200 a-f in 3 months
The Diabold Creek Watershed

- Reservation Homes - 5
- Cattle grazing
  2 Homes
- Water Company
  60 Homes
- 1/2 acre pond

Campo Wetland: a work in progress
Early Erosion Problem

- Years of grazing left the valley barren.

09/11/2006
Preparing Channel
Rock Structures
Beginnings of Recovery c. 1993-1994

- Rains of 1993
- Continue planting
Increase in Diabold Storage

3 mi valley roughly ¼ mile wide
Water table raised by 20 feet in D-G & Alluvium

\[ 3 \times 5280 \times 1320 \times 20 = 9600 \times 0.05 \times 43,560 \]

The Diabold project represents an additional storage of 480 acre-feet of water in the basin

Conclusion

- Realistic proposals to control usage & enhancement of supply
  - Market trading programs
  - Incentives
- Planning and CEQA reviews should reflect basins
- Tribal usage should, at a minimum, be assumed to be 100% of safe yield
CHARTER
Interagency Technical Working Group
on Tribal Transportation Issues

PURPOSE
The purpose of the Interagency Technical Working Group on Tribal Transportation Issues (Working Group) is to serve as a forum for tribal governments in the region to discuss and coordinate transportation issues of mutual concern with the various public planning agencies in the region, including SANDAG, Caltrans, the County of San Diego, and the transit operators. In partnership with the Reservation Transportation Authority (RTA), the Working Group will monitor and provide input on the implementation of the strategies and planning activities related to transportation mutually developed through the San Diego Regional Tribal Summit. There is currently no other working group that can serve this function.

LINE OF REPORTING
The Working Group reports to the Borders Committee, which reports to the Board of Directors on tribal-related transportation activities.

RESPONSIBILITIES
The Working Group responsibilities include reviewing current activities and plans being implemented by SANDAG and the tribal governments in an effort to coordinate programs, address issues of concern, and ensure that the needs and issues of tribal governments are being incorporated into the transportation planning process at the regional level. The Working Group will provide feedback and comments on current and planned activities and provide technical advice on the implementation of these activities. The Working Group also assists with the associated outreach to the tribal community on transportation issues of regional significance. In carrying out these responsibilities, the initial activities of the Working Group will include providing input on and addressing the following:
- 2007 RTP Issue Paper
- Tribal Transit Feasibility Study
- Strategies developed from the 2006 technical workshop
- Tribal related corridor studies in pursuit of collaborative funding
- Recommend collaborative funding issues and strategies to the Policy Advisory Committees

MEMBERSHIP
The voting membership of the Working Group shall be comprised of one representative from each of the federally recognized tribal governments and California tribes in San Diego County. These voting members shall be appointed by the leadership of their respective tribes for a term of one calendar year. Caltrans, the County of San Diego, the Reservation Transportation Authority, Metropolitan Transit System and North County Transit District shall each be entitled to appoint one advisory member of the working group. Each entity represented in the working group, whether voting or advisory, may additionally appoint an alternate representative to serve in the primary member’s absence. Any member who misses two meetings in a row or three meetings in a calendar year shall be removed and replaced by that member’s alternate, if any. Should a vacancy occur in the position of a primary or alternate member, a represented entity shall be entitled to appoint a replacement representative.

The Working Group membership is open to one designated representative from each of the federally recognized tribal governments and California tribes in the San Diego region, as well as one staff representative from Caltrans, County of San Diego, Metropolitan Transit Service, and
North County Transit District. The Co-Chairs of the Working Group will be chosen by the members of the group on a periodic basis.

MEETING TIME AND LOCATION
The Working Group will meet quarterly on the _____ of the month from _____ to ____. The location will rotate among tribal reservations, and, when deemed appropriate, at the SANDAG offices.

SELECTION OF THE CHAIR
The Working Group shall have a Chair and Vice-Chair, who will be chosen by a vote of the voting members of the group on an annual basis.

DURATION OF EXISTENCE
The Working Group will continue as long as the tribal governments and participating agencies determine that it serves as an effective means of communication and coordination, subject to annual review.
Bureau of Indian Affairs
Indian Reservation Roads Program

Cynthia Gomez, Chief
Native American Liaison Branch
Caltrans

BIA IRR Program

• Funded under the Federal Lands Highway Program, 23 U.S.C. 204
• Established on May 26, 1928 by Public Law 520 (25 USC 318 (a))
• Program is jointly administered by the BIA and Federal Lands Highway Office of the FHWA
Federal Lands Highway Division Offices

BIA

• BIA Regional Office in Sacramento
• Three BIA Agencies (Northern, Central, and Southern)
• Service
  – From planning through engineering to construction oversight
• Major partners include
  – National Park Service
  – U.S. Forest Service
  – Fish and Wildlife Service
  – Bureau of Indian Affairs
  – State and local governments and DOTs
IRR Program Changes

Other Programs

• Safety (Sec. 2002)
  – 11 different DOT Safety programs
    • BIA shall establish a simplified process for applications for grants for Indian tribes under this chapter

• Scenic Byway Program (Sec. 1802)
  – Tribes can nominate a Scenic Byway
    • Tribe must be responsible to maintain safety and quality of roads that are nominated
Other Programs

- Bridge Discretionary
- Ferry Boat Discretionary

Public Transportation on Indian Reservations

- Transit funds provided for program
  - $8 million in FY06
  - $10 million in FY07
  - $12 million in FY08
  - $15 million in FY09

  (Total = $45 million)

Additional presentation
IRRHPP Time-Line

- March 31
  - Funding Priority List (FPL) generated
  - All unaccepted applications (based on eligible criteria) returned to applicant with explanation of deficiencies.
  - BIA develops IRRHPP TIP and forwards to FHWA for approval.

- April 15
  - BIA notifies all approved applicants.

- May 15
  - IRRHPP funds are distributed

IRR Program Funding

- FINAL BILL
  - FY05 – $300,000,000
  - FY06 – $330,000,000
  - FY07 – $370,000,000
  - FY08 – $410,000,000
  - FY09 – $450,000,000
  - Total $1,860,000,000

- Including FY 04
  - TOTAL - $2,135,000,000
California IRR Program

- 108 Tribes
- BIA-IRR Funds $14,000,000/year
- California BIA IRR funds:
  - Less than $5 million-Construction
  - Less than $800,000 for Maintenance.
  - Approx. $100,000 for Planning

Formula for $ Distribution

- Population
- Vehicle miles Traveled (Inventory Data)
- Construction Costs (ADTs)
**Roads/Bridges that Qualify**

- Roads or Bridges
- Primary access routes (on or leading to the Reservation)
- Housing Access
- Site Access
  - Social
  - Economic
  - Religious
  - Cultural

**Inventory Requirements**

- 25 CFR 170
- IRR Submission Requirements
  - Strip maps
  - Route Narrative
  - 5704 Forms for RIFDS
  - ADT Documentation
  - Long Range Transportation Plan
  - *Letter or MOU with Local or State Jurisdiction*
Letter or MOU

- Identifying State ownership of the routes or bridges;
- The State will continue to maintain the facilities;
- The facility is not eligible for federal funding for construction or reconstruction; or if the facility is eligible for federal funds for construction or reconstruction, the State is unable to provide funding for the project.
- Does NOT transfer ownership or jurisdiction!

Sample Language

This agreement relates specifically to the (local) routes and bridges listed below, that are proposed to be added to the BIA IRR inventory, which the (local Government) will continue its existing ownership, jurisdictional, and maintenance responsibilities and the facilities will continue to be open to the public. The (local government) is not relinquishing jurisdiction nor granting jurisdiction to the Tribe or BIA for any listed routes, bridge or associated rights of way. The Tribe has identified all sections of the public (local) routes and/or bridges as critical transportation facilities which provide access within and leading to the Tribe’s Reservation and are important to the Tribe because they serve the Tribal community.

- State Route#
- Name
- Post Miles
- Length
- County Located

The routes and bridges identified in this agreement are eligible for construction or reconstruction with federal funds but the (local government) is unable at this time to provide funding for projects. When and if adequate funding for needed improvements for these routes and/or bridges become available, and improvement has become an approved project for the Tribe, (local government), or BIA, a separate cooperative funding agreement will be negotiated as necessary in accordance with applicable statutes and regulations. If improvements to the routes and bridges are completed under a separate cooperative agreement, the (local government) will continue to be responsible for maintenance to routes and bridges, which will remain open to the public.
Benefits

• Tribes have more funding for transportation planning and programming.
• Transportation plans and data assist Tribal, State, BIA and MPO/RTPA planners for system planning.
• Information assists Tribes, State, BIA, MPOs/RTPAs during consultation, collaboration, and coordination.

Information

http://www.fhwa.dot.gov/flh/index.htm
Questions?

Kanu Patel
IRR Program Manager
(916) 978-6033

Cynthia Gomez, Chief
Native American Liaison Branch
(916) 654-2389
cynthia.gomez@dot.ca.gov
Groundwater Usage and Tribes in San Diego County
Presented to SANDAG Borders Committee

September 8, 2006
By Michael Connolly Miskwish
Councilman, Campo Kumeyaay Nation

Introduction

Protection and fair distribution of groundwater resources are significant issues for most tribes in the County, yet very little has been done to establish a mutually acceptable basis for managing this most important resource.

Under current water rights law, adjudicating water rights can be an expensive, time consuming process. Barring an adjudication, groundwater usage tends to follow the “Law of the Commons”, in that there is no restriction on individual usage of a resource and usage to the point of exhaustion of the resource can actually reward the user.

The closest thing to groundwater management that exists in most areas of the back country is the water quantification process that developers must undergo in the planning process. This process establishes a “safe yield” determination that provides the parameters for the new developers’ proposed water usage. This quantification has two significant components. First is the model that San Diego County uses in determining the safe yield of individual basins. Second, is the restriction on new uses based on current actual uses of the water.

The Model

The model used in groundwater quantification is a relatively simple water balance calculation. The County Hydrologist is working with county hydrology experts to improve the existing model by incorporating GIS, focusing on more discrete elements and truth-testing the model with data from well-documented basins. So far, the testing has shown a significant correlation between the model and the actual data.

The fact that the model is proving out in the current truth-testing by the County Hydrologist adds credence to the water quantification methodology of using basin perimeters.

Application – Cattle, Agriculture, Water Companies, Homes, Lakes, Casinos

The second part of groundwater management in San Diego County is a cause of great concern from a tribal perspective. When developing a project in San Diego County the developer will use the groundwater model to determine the safe yield of water from the basin. He then must quantify existing usage and ensure that
his development will not push the total usage above the safe yield rate. On the surface this appears to be a sound policy. In point of fact, however, it can result in a taking of groundwater resources by wasteful practices.

The problem with this policy is that the County assumes a certain amount of groundwater usage per household (.5 acre-feet/year, for example). Yet once the home is built the homeowner could use significantly more water than the County estimates and there is no legal recourse to prevent this from happening. If a homeowner decides to plant an acre of alfalfa he could use 3-5 acre-feet/year of groundwater to irrigate. If a one acre pond is created on his land, and filled with groundwater, he could lose 6-7 acre-feet/year of water to evaporation. Overgrazing by cattle could result in the loss of hundreds of acre-feet of water to increased evaporation and loss of storage capacity through erosion. The County also has licensed water companies to operate in several areas of the County. These companies generally have no restrictions on the volume of water they are allowed to sell. This could be hundreds of acre-feet of water for major construction projects.

Crops, cattle, water companies and ponds are significant unregulated water users in the groundwater dependent areas of the County. So what has the County done to help prevent overdrafts? First, the County does little to regulate the existing users, even when the user is far over the sustained yield based on their property ownership. Second, the County’s requirement for quantification only applies to the initial permitting process and does not prevent the homeowner or developer from exceeding the initial calculations after the build out. Third, the County has no program for factoring in groundwater recharge enhancement. Therefore, there is little incentive for these proven programs to improve recharge and storage.

The County does have a few projects that require ongoing monitoring of water usage. This appears to be a consistent request of all proposed casinos that are to be supplied by groundwater. This is probably good data for long-term understanding of the aquifer characteristics. Where it becomes problematic is when the intended use of the data is solely for the purpose of establishing a threshold for curtailing consumption by the tribe, with no commensurate restriction or curtailing required for the off-Reservation users.

The bottom line on this practice is that groundwater resources on Reservation land are being treated as property of off-Reservation users. This is very similar to the situation when San Diego wished to line canals in Imperial Valley. Mexican irrigators who relied on the waste seepage from the canals objected to the lining since it would reduce their volume of water. Many communities living on the edge of a Reservation have benefited from years of lack of development on the tribal lands. Some of them may be directly dependent on water recharge from the Reservation. **This does not give them the right to that water.** If the tribe decides to use their resource and the neighboring properties are affected, it
should not be considered an impact as long as the tribe is staying within the safe yield calculations for the lands under their jurisdiction.

Potential Courses of Action

If we set a goal to manage this joint resource in any kind of fair method that can avoid or preclude water rights litigation, we need to cover several core areas.

- Bring in some true analysis and comparison of the affects of different usages on the water supply. For example, restricting development to protect the water supply is counterproductive if agriculture can then far exceed the residential water budget. This could be a direct consequence of down zoning to larger lot sizes.
- Set up transboundary usage reduction and supply enhancement incentives. These could be modeled on existing habitat conservation planning and may actually be synergistic with such programs.
- Environmental reviews and land use planning should consider all basin properties as “adjacent” in the process. Tribes are not notified as “adjacent” property holders unless the property is within a standard distance. The adjacent definition should be expanded to include the entire basin properties.
- When quantifying usage, the tribal lands should be assumed to be 100% of safe yield. Current practice is to look at existing uses and assume that the balance is available for off-Reservation usage.

The alternative to establishing mutually acceptable standards could easily develop into a race to the bottom. Some inland wells in San Diego County are already below sea level. If we want to defer or eliminate the need and expense of imported water, we must bring all uses and users into the evaluation.