

Environmentally Sustainable Business Opportunities Survey
UTB/TSC Department of Continuing Education

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Contributors:

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Introduction

As we start the new millennium, environmental quality has come to occupy a central place in the public policy of the United States. There is an emerging consensus that all nations must move rapidly toward new forms of “sustainable development” if future generations are to survive and prosper. Indeed, it is no longer possible to think about economic growth and development without considering the ecological impacts of virtually all human activities. One of the most commonly used definitions of sustainable development is: “the ability to satisfy current needs without compromising the ability of future generations to meet their needs”.

Background

UTB/TSC Workforce Training and Continuing Education undertook this study to explore the potential for environmentally sustainable business opportunities in the region. The Texas Center for Policy Studies (TCPS), in an effort to promote environmentally sustainable development in the region, provided funds for this study.

The following are important demographic variables influencing the economic condition of our region (Cameron, Hidalgo and Willacy counties in the Lower Rio Grande Valley).

Population

The area’s demographics, when compared to the demographics of Texas overall, reveal disproportionate percentages, not only in race/ethnic distribution but also in age. The following table shows 1990 and 2000 census data for Starr, Cameron, Hidalgo, and Willacy counties combined.

Ethnicity	1990	1990	2000	2000
	<u>Region</u>	<u>Statewide</u>	<u>Region</u>	<u>Statewide</u>
White	17.44%	60.59%	11%	52.4%
Black	0.50%	11.23%	0	11.3%
Hispanic	81.88%	25.55%	87%	32%
Other	0.46%	2.23%	2%	0.1%

Age Distribution

The age distribution of the area provides insight into the economic composition. By national standards, Texas has a relatively young population. The region has an even younger age distribution than the state overall. The 1990 Census estimates for the region and Texas are as follows:

	<u>Region</u>	<u>Statewide</u>
Age 0-4	8.9%	8.1%
Age 5-15	22.2%	17.4%
Age 16-24	15.2%	13.8%
Age 25-44	27.3%	33.4%
Age 45-64	15.7%	17.3%
Age 65 plus	10.5%	10.1%

The higher percentage of the age 5-15 and 16-24 groups signifies that a considerable number of people will be entering the labor market over the next decade. This may be seen as either a positive or negative factor in attracting industry. Unfortunately, the region has experienced an extremely high dropout rate. Approximately 40 percent of the Valley's population age 25 and under have less than a ninth grade education.

Methodology

In recent years, initiatives such as business incubators, micro-enterprise development programs, job creation incentive programs, and a federal empowerment zone among others have brought much-needed financial assistance and training to communities and businesses in the region. Much work remains to be done to ensure that while the region grows and seeks to meet the employment needs of its residents it also strives to achieve environmentally sustainable economic development. The goal of this study is to identify the potential for environmentally sustainable business opportunities in our region.

The first step in the development of this study was to define what is an environmentally sustainable business. The Texas Center for Policy Studies considers that the criteria for such businesses must be defined within the context of the community and existing practices. For the purposes of this study, a workable definition of an environmentally sustainable business was considered to be:

A business that practices pollution prevention and energy efficiency to the maximum extent possible, and is efficient in its use of resources so that waste streams are minimized. Another important characteristic is that these businesses should provide living wages to their workers.

Once this definition of environmentally sustainable business was selected for use by this study, the study group's next task was to gather information that would provide a breakdown of the business sectors represented in the area and an assessment of the predominant economic activity in the region. The information gathered was very valuable for the development of the following step in our study.

The study group identified three target populations and designed a survey for each one. Surveys contained standard sets of questions for each population, plus one to five additional questions designed specifically for that population. The target populations were:

- Community Leaders/ General Public
- Business Representatives
- Economic Development Councils

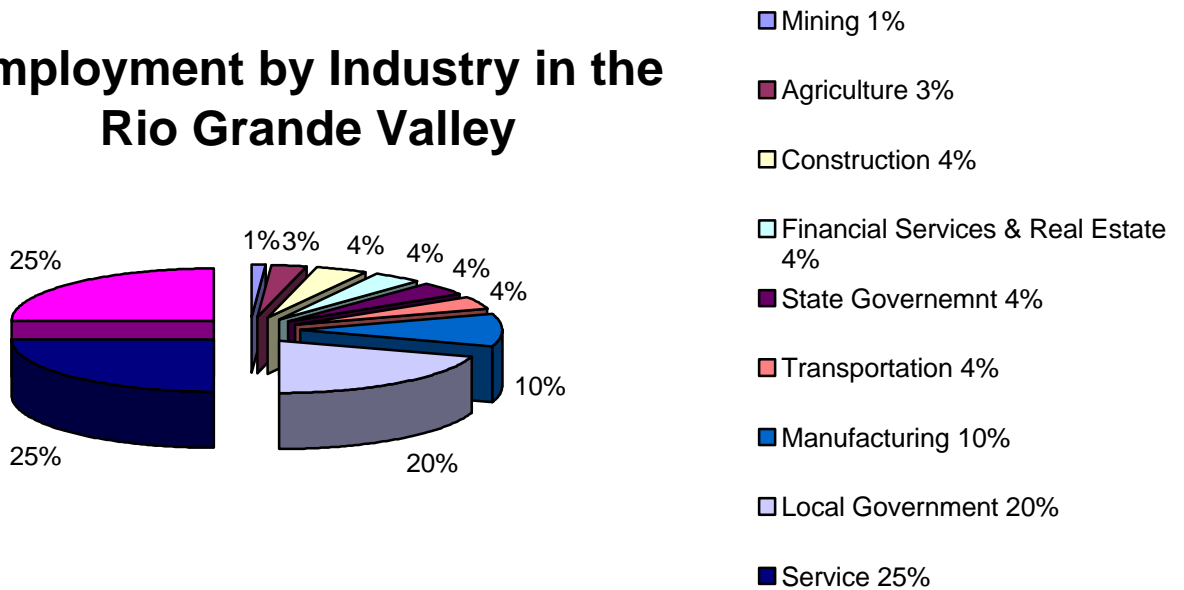
Findings

Description of Region

Employment growth characterizes the outlook for Rio Grande Valley (RGV) in the coming decade. All industries are projected to see increased levels of employment over the next 10 years.

The total area of this region is 3,644 square miles, with a total population in 2000 of 978,369 (according to the latest census figures). This region has grown by 29.6 percent since the last census in 1990, averaging an annual growth rate of 3.7 in the last eight-years (Source: US Bureau of the Census.) Job growth has accompanied population growth. Due to the evolution of technology, the skills required for these jobs are also evolving. Jobs in labor-intensive industries are decreasing and those requiring higher skills are increasing.

Employment by Industry in the Rio Grande Valley



(Source: Texas Workforce Commission)

Some of the largest employers in the region include public schools, manufacturing companies, hospitals and health care agencies, and restaurants. The industries that have shown the most significant growth in recent years in this region are: health services, educational services, and special trade contractors (Source: The Brownsville Herald.)

Appendix A offers a breakdown of employers in Cameron County, to illustrate the types of businesses that characterize these industries in the region. (Source: Cameron Works).

Survey Results

1. What does an environmentally sustainable business mean to you? (31 respondents)
 - A business that reduces costs by reducing waste
 - A business that produces the least amount of waste used from raw material
 - A business that promotes a “healthier life”
 - A business that cares about it’s community
 - A business that utilizes resources in a manner that will not deplete the resource for future generations
 - A profitable and successful business with minimum impact on the environment
 - Business that do not place undue burden on our natural resources or our ability to supply that resource without additional expense
2. From the following list of environmentally sustainable business types¹, please check the ones you can identify that presently exist in the Rio Grande Valley. Can you refer us to any companies from this list? (31 respondents)

Ranking: (1) being listed most frequently

- 1 Recycling
- 2 Eco-tourism
- 3 Horticulture/nurseries
- 4 Environmental consulting firms
- 5 Remanufacturing
- 6 Historical preservation companies
- 7 Organic agriculture
- 8 Alternative energy sources
- Other

Appendix B contains a list of existing businesses, most of which were identified by the respondents, which might be considered within the above classifications.

3. From the following list, rank in order of feasibility (with 1 being the most feasible) those environmentally sustainable businesses that have the most potential in the Rio Grande Valley. (31 respondents)

- 1 Eco-tourism
- 2 Recycling
- 3 Horticulture/nurseries
- 4 Remanufacturing
- 5 Organic agriculture
- 6 Environmental consulting firms

¹ Ed. Note: Somewhat misleading and a design flaw in the survey – these businesses might not automatically be considered sustainable, as sustainability refers more to a set of practices and operating goals. Moreover, companies cannot be considered sustainable simply by virtue of their product.

- 7 Alternative energy sources
- 8 Historical preservation companies

4. In your opinion, what is the level of awareness in the community of Rio Grande Valley about environmentally sustainable business opportunities? Please check appropriate answer. (31 respondents)

High	0%
Medium	23%
Low	77%

5. In your opinion what is the level of awareness among government officials in the Rio Grande Valley about environmentally sustainable business opportunities. Please check appropriate answer. (31 respondents)

High	0%
Medium	29%
Low	71%

6. Which of the following initiatives are important to sustainable development in the Rio Grande Valley? (31 respondents)

Ranking: (1) being the most important

Incorporate sustainable business criteria into economic development incentives	1
New higher education programs related to sustainable development	2
Sustainable Development training for economic developers and government officials	3
K-12 programs on environmental education	3
Certification programs in environmental education	4
Development of an environmental education center	5
Training for eco-tourism guides	6

7. What type of education/training needs do you think individuals will require in order to work in an environmentally sustainable business? (28 respondents)

- Examples of a working system with hands-on experience
- Environmental and engineering technology programs
- Certification programs in environmental education
- New higher education programs related to sustainable development
- Training for eco-tourism guides
- Sustainable Development training for economic developers and government officials
- K-12 programs on environmental education
- On the job training
- Strong knowledge of environmental sciences and governmental regulations and environmental laws

8. What do you see as being constraints to establishing environmentally sustainable businesses given the current social and political reality in the Rio Grande Valley? Please rank by importance (1) being the greatest constraint. (28 respondents)

Lack of awareness by the community	1
Lack of investment capital for environmentally sustainable business	2
Lack of awareness by economic development and government officials	3
Incentives not being tied to sustainability criteria	4
Lack of trained workers for environmentally sustainable business needs	5
Economy (high unemployment rate, e.t.c.)	6

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Question Items for business representatives only:

9. Do you consider your company an environmentally sustainable business? Please check the appropriate answer. (15 respondents)

Yes 71%
No 29%

10. Does your company have interest in expanding into environmentally sustainable products or services? (15 respondents)

Yes 57%
No 43%

Question items for economic developers only:

9. Is environmental sustainability a criterion in your organization when allocating job incentive monies? Please check appropriate answer. (5 respondents)

Yes 40 %
No 60%

10. Please explain how you implement this environmental sustainability criterion in your job incentives program.

One EDC explained that “when deciding whether to offer particular incentives to a company, they do look at the impact that a company will have on natural resources and on water/waste water systems.”

The other EDC explained that it is implied in their qualification process that they will only consider companies that have good environmental practices.

11. Is your organization planning to consider environmental sustainability in job incentive allocation? If “yes” when do you estimate this will take place? Please check appropriate answer. (4 respondents)

No	75%
Within 1 year	0 %
More than 1 year	25%

12. Would you like to receive example policies from other cities that consider environmental sustainability in allocating job creation? Please check appropriate answer. (5 respondents)

Yes	80%
No	20%

Conclusions

Clearly, respondents viewed lack of awareness – by local elected officials and by the public, as a principal limiting factor to achieving sustainable development. One of the most interesting responses was to Question #6, where respondents identified the most important initiative to promoting sustainable development as “incorporating sustainable business criteria into economic development incentives”. A limitation of the survey is that it does not define “sustainable business criteria”. It could be the respondent was thinking of criteria that sustain businesses profits or the longevity of a company rather than the environment.

Some of the later survey questions are also rather inconclusive and contradictory. For example, 71% of business respondents surveyed (10 of 15) indicated that they considered their business to be environmentally sustainable. Within the same group of respondents, however, 43% replied that they had no interest in expanding into environmentally sustainable products or services.

The responses from economic development entities (EDE) were somewhat less ambiguous. While few responded (4 or 5) in terms of sheer numbers to the survey, this is actually a relatively good response, representing some 25% of the total number of economic development entities, some of which are staffed by only one person.

Research and focus groups have shown that in the Valley, job creation seems by far to be the most important factor shaping EDE policies for attracting businesses to the region. This may be why the response was largely negative to question 11. However, it appears in the following question that EDE’s are interested in learning about how to shape more environmentally sustainable policies.

Based on this survey, which admittedly is limited in terms of being able to draw too many concrete conclusions, respondents appear to be fairly interested in the topic of environmentally sustainable businesses but not necessarily predisposed to pursue them independently. The feeling may be that the great lack of awareness and lack of support systems are too prevalent to try to put such policies into place currently. This seems to indicate a need to build awareness about what environmental sustainability is to begin with – not just a type of business, but a set of principles and ideals that a company follows that are a natural part of the company’s functioning. This seems to be the biggest leap of all. In a region (the border) where simply complying with environmental regulations and implementing pollution prevention programs is considered meeting the highest standards of environmental responsibility, sustainability ideals will have difficulty taking hold. (See Appendix C for some information about what local industries are doing voluntarily to reduce waste and increase efficiency).

In sum, it seems the most important work TCPS can do is to provide real world examples of environmental sustainability. This might be achieved through research and information-sharing, through the establishment of an environmentally sustainable business development fund with its own sustainability criteria, or through partnering with a local EDE to try to incorporate sustainable criteria into existing practices.

Appendix A Top Employers in Cameron County

Employer	City	ZIP	SIC	Size
<u>UTB/TSC</u>	Brownsville	78520	8221	1,000+
<u>LUCENT TECHNOLOGIES INC</u>	Brownsville	78521	5065	1,000+
<u>COMPONENTES MECANICOS</u>	Brownsville	78521	4226	1,000+
<u>FRUIT OF THE LOOM TEXAS INC</u>	Harlingen	78553	2254	1,000+
<u>VALLEY BAPTIST HEALTH SYSTEM</u>	Harlingen	78550	8062	1,000+
<u>HARLINGEN CNSLD IND SCHL DST</u>	Harlingen	78550	8212	1,000+
<u>COLUMBIA VLY REGIONAL MED CTR</u>	Brownsville	78526	8062	500- 999
<u>CONVERGYS</u>	Brownsville	78520	8721	500- 999
<u>AMFELS INC</u>	Brownsville	78523	1629	500- 999
<u>LEVI STRAUSS & CO</u>	Brownsville	78521	2325	500- 999
<u>CITY OF HARLINGEN</u>	Harlingen	78551	9121	500- 999
<u>SUNGLO FELLOWSHIP CENTERS INC</u>	Harlingen	78550	8322	500- 999
<u>THE WILLIAM CARTER COMPANY</u>	Harlingen	78550	2341	500- 999
<u>RIO HONDO IND SCHOOL DISTRICT</u>	Rio Hondo	78583	8212	500- 999
<u>HEART OF THE VALLEY HOSPICE</u>	San Benito	78586	8082	500- 999
<u>LEVI STRAUSS & CO</u>	San Benito	78586	2339	500- 999
<u>RIO GRANDE VALLEY SUG GROWERS</u>	Santa Rosa	78593	2061	500- 999
<u>SCHOOL BUS TRANSPORTATION</u>	Brownsville	78526	4151	250- 499
<u>CARING FOR YOU HOME HEALTH</u>	Brownsville	78523	8082	250- 499
<u>C A D BROWNSVILLE</u>	Brownsville	78523	3291	250- 499

Employer	City	ZIP	SIC	Size
BROWNSVILLE MEDICAL CENTER	Brownsville	78523	8062	250-499
PARKER HANNIFIN CORPORATION	Brownsville	78522	3053	250-499
NARCOTICS ENFORCEMENT	Brownsville	78520	9221	250-499
ALLISON MANUFACTURING	Brownsville	78520	2331	250-499
RICH-SEAPAK CORP	Brownsville	78521	2092	250-499
HORACE SMALL APPAREL	Brownsville	78521	2311	250-499
HEB GROCERY CO	Brownsville	78521	5411	250-499
BROWNSVILLE-HANNA HIGH SCHOOL	Brownsville	78521	8211	250-499
WAL-MART STORE	Brownsville	78521	5311	250-499
RIO GRANDE STATE CENTER	Harlingen	78551	9431	250-499
BORDER PATROL	Harlingen	78550	9221	250-499
H E BUTT GROCERY CO	Harlingen	78550	5411	250-499
WAL-MART SUPER CENTER	Harlingen	78552	5311	250-499
MANPOWER INC	Harlingen	78550	7363	250-499
APC HOME MAKERS	Harlingen	78550	8082	250-499
LOCKHEED MARTIN ASTRONAUTICS	Harlingen	78550	3721	250-499
TEXAS PACK INC	Port Isabel	78578	2092	250-499
POINT ISABEL IND SCHL DST	Port Isabel	78578	8212	250-499
MORNINGSIDE ELEMENTARY SCHOOL	Brownsville	78521	8211	100-249
SPANISH MDOWS NURSING CARE CTR	Brownsville	78526	8051	100-249

Employer	City	ZIP	SIC	Size
WAL-MART STORE	Brownsville	78520	5311	100-249
KMART	Brownsville	78521	5311	100-249
SEARS ROEBUCK & CO.	Brownsville	78521	5311	100-249
NORTON COMPANY	Brownsville	78521	3541	100-249
ORC INDUSTRIES	Brownsville	78520	2311	100-249
BROWNSVILLE PUBLIC UTILITIES	Brownsville	78521	4939	100-249
FIRED UP INC.	Brownsville	78526	5812	100-249
HOME DEPOT	Brownsville	78521	5251	100-249
MONTGOMERY WARDS	Brownsville	78520	5311	100-249
P.U.B.	Brownsville	78521	4931	100-249
DELPHI DELCO ELEC SYSTEMS	Brownsville	78523	4226	100-249
RANCO NORTH AMERICA	Brownsville	78522	4225	100-249
METRO ELECTRIC INC	Brownsville	78523	1731	100-249
DURO BAG MANUFACTURING CO	Brownsville	78523	2631	100-249
BROWNSVILLE HOUSING AUTHORITY	Brownsville	78523	9531	100-249
SOUTHWESTERN SECURITY SERVICE	Brownsville	78520	7381	100-249
NEAL ROBINSON WHL GREENHOUSES	Brownsville	78523	5193	100-249
TEX-MEX COLD STORAGE INC	Brownsville	78523	4222	100-249
PUBLIC UTILITIES BOARD	Brownsville	78523	4911	100-249
BROWNSVILLE HERALD	Brownsville	78522	2711	100-249

Employer	City	ZIP	SIC	Size
<u>SEARS STORE</u>	Brownsville	78523	5311	100-249
<u>HOLIDAY INN-FORT BROWN</u>	Brownsville	78520	7011	100-249
<u>EL GLOBO</u>	Brownsville	78521	7389	100-249
<u>GLOBE SUPERMARKET</u>	Brownsville	78520	5411	100-249
<u>ATOHAAS MEXICO INC</u>	Brownsville	78520	2821	100-249
<u>AG TECHNOLOGIES INC</u>	Brownsville	78520	3677	100-249
<u>GARDEN PARK ELEMENTARY</u>	Brownsville	78520	8211	100-249
<u>WILLIAMS CUTTING SERVICE INC</u>	Brownsville	78520	7219	100-249
<u>VALLEY GRANDE MANOR</u>	Brownsville	78520	8051	100-249
<u>BRUCE AIKEN ELEMENTARY SCHOOL</u>	Brownsville	78521	8211	100-249
<u>TITAN TIRE CORP OF TEXAS</u>	Brownsville	78526	3011	100-249
<u>VERMILLION ELEMENTARY SCHOOL</u>	Brownsville	78521	8211	100-249
<u>EL JARDIN ELEMENTARY SCHOOL</u>	Brownsville	78521	8211	100-249
<u>SIMON RIVERA HIGH SCHOOL</u>	Brownsville	78521	8211	100-249
<u>PUBLIC WORKS DEPT</u>	Brownsville	78521	9511	100-249
<u>BROWNSVILLE GOOD SAMARITAN CTR</u>	Brownsville	78521	8059	100-249
<u>EMERGENCY MEDICAL SERVICE</u>	Brownsville	78520	9224	100-249
<u>LEASEWAY TRANSPORTATION CORP</u>	Brownsville	78521	4225	100-249
<u>OLIVEIRA INTERMEDIATE SCHOOL</u>	Brownsville	78521	8211	100-249
<u>LIN-BUK</u>	Brownsville	78521	5932	100-249

Employer	City	ZIP	SIC	Size
<u>CAMPBELL TEXTILES INC</u>	Brownsville	78520	7218	100-249
<u>BROWNSVILLE PACE HIGH SCHOOL</u>	Brownsville	78520	8211	100-249
<u>LOPEZ HIGH SCHOOL</u>	Brownsville	78521	8211	100-249
<u>MUELLER CO</u>	Brownsville	78521	3823	100-249
<u>ALBERTSONS</u>	Brownsville	78521	5411	100-249
<u>PORTER HIGH SCHOOL</u>	Brownsville	78521	8211	100-249
<u>UNIQUE HOME HEALTH</u>	Brownsville	78521	8082	100-249
<u>CARLINGSWITCH INC</u>	Brownsville	78521	3625	100-249
<u>STELL INTERMEDIATE SCHOOL</u>	Brownsville	78520	8211	100-249
<u>RAG WHISPERING PALMS</u>	Brownsville	78520	8361	100-249
<u>UNITED STATES POSTAL SERVICE</u>	Brownsville	78520	4311	100-249
<u>SAMS CLUB</u>	Brownsville	78521	5399	100-249
<u>UNIVERSITY OF TEXAS AT EDINBUR</u>	Brownsville	78520	8221	100-249
<u>H E BUTT GROCERY CO</u>	Brownsville	78520	5411	100-249
<u>MARTIN ELEMENTARY</u>	Brownsville	78520	8211	100-249
<u>FAULK MIDDLE SCHOOL</u>	Brownsville	78521	8211	100-249
<u>BROWNSVILLE CMNTY HLTH CLINIC</u>	Brownsville	78521	8011	100-249
<u>PANASONIC INDUSTRIAL</u>	Brownsville	78521	4225	100-249
<u>WORLD CLOTHING CORPORATION</u>	Brownsville	78526	5136	100-249
<u>AMERICAN INVESTIGATIONS & SEC</u>	Brownsville	78521	7381	100-249

For an in-depth breakdown of the number of establishments by Industry (NAICS codes) by county, please visit the following websites:

1998 County Business Patterns for Cameron, TX at:

<http://www.cache.census.gov/epcd/cbp/map/98data/48/061.txt>

1998 County Business Patterns for Hidalgo, TX at:

<http://www.cache.census.gov/epcd/cbp/map/98data/48/215.txt>

1998 County Business Patterns for Willacy,

<http://www.cache.census.gov/epcd/cbp/map/98data/48/489.txt>

Appendix B

Examples of Businesses in Brownsville that respondents considered environmentally “sustainable”

Recycling:

Bromex Recycle 3135 E 14th Street # 2, Brownsville, TX	(956) 542-4988
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Brownsville Scrap Paper Incorporated 5850 Fm 511, Brownsville, TX	(956) 838-1999
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Brownsville Scrap Paper Incorporated 144 Tudela Street, Brownsville, TX	(956) 548-1588
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Edgar Jackson Recycling 3545 E 14th Street, Brownsville, TX	(956) 504-2128
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JBM Fibers Incorporated 4656 Towerwood Drive, Brownsville, TX	(956) 831-7707
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Jim Wilkinson Iron & Metal Incorporated 3145 E 14th St, Brownsville, TX	(956) 546-4042
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Mervis Industries 6955 Fm 511, Brownsville, TX	(956) 838-0011
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Southern Metal & Export Company (956) 831-5257
2605 N Indiana Avenue,
Brownsville, TX

Valley Cardboard Recycle (956) 831-0022
5405 E 11th St,
Brownsville, TX

Industrial Plastics & Recycling (956) 541-9466
1284 El Jardin Heights Road
Brownsville, TX 78520
e-mail: tmretana@aol.com

Mervis Industries (956) 838-0011
6955 North FM 511
Brownsville, TX 78521

G.M.S. Waste Disposal (956) 544-2100
2965 E. 13th St.
(Entrance on 14th-nxt to Wilkenson Yard)
Brownsville, TX 78521

Remanufacturing:

GSR Industries, Ltd. (956) 541-6886
6665 E. 14th St.
Brownsville, TX 78520
e-mail: ogarza@riogrande.net.mx

Horticulture:

Evergreen Tree Care & Landscape (956) 544-7336
1191 E Ruben M Torres Boulevard,
Brownsville, TX

Garcia's Pottery (956) 504-9426
4917 Florencia Avenue,
Brownsville, TX

Gentry's Garden Center (956) 350-9805
4580 N Expressway,
Brownsville, TX

Mat Construction Company (956) 548-1278
284 N Camino Del Rey,
Brownsville, TX

Palm Gardens Nursery (956) 546-1348
345 Galveston Rd,
Brownsville, TX

Sam's Nursery (956) 541-9779
5527 Southmost Road,
Brownsville, TX

Tony's Nursery (956) 541-5322
895 E Los Ebanos Blvd,
Brownsville, TX

Environmental Consultants

Ambiotec Group, Inc.
302 Kings Hwy, Suite 108
Brownsville, TX 78521
(956) 423-7807
e-mail: cmmarin@ambiotec.com

Raba-Kistner Consultants, Inc.
1050 McIntosh, Suite 4
Brownsville, TX 78521
(956) 504-9777
e-mail: mvilla@rkci.com

Calidad Environmental Services
5403 Everhart St. #46
Corpus Christi, TX 78411
(361) 814-0701

REO Engineers and Surveyors, L.T.D.
535 Stovall Road
Brownsville, TX 78520
(956) 504-2282
e-mail: rriggins@reo-es.com

Raba-Kistner Consultants, Inc.
1050 McIntosh, Suite 4
Brownsville, TX 78521
(956) 504-9777
e-mail: mvilla@rkci.com

Turner Collie & Braden, Inc.
880 Ridgewood St., Suite A
Brownsville, TX 78520
(956) 544-6490

NRS Consulting Engineers
P.O. Box 2544
Harlingen, TX 78551
(956) 423-7409
e-mail: 1977aggie@worldnet.att.net

Eco Tourism-related businesses & non-profits

Sabal Palm Audubon Center & Sanctuary

Palm Grove Rd.
Brownsville, TX 78521
(956) 541-8034
e-mail: jimmypaz@ies.net

World Birding Center
900 N. Bryan Road #201
Mission, TX 78572
(956) 584-9156
e-mail: tpwdwbc@acnet.net

Camp Lula Sams
280 N. Fish Hatchery Road
Brownsville, TX 78520
(956) 350-9093
e-mail: greenjaycamp@aol.com

The Inn at Chachalaca Bend
20 Chachalaca Bend Drive
Los Fresnos, TX 78566
(956) 233-1180
e-mail: inn@chachalaca.com

Mejia & Rose, Inc.
1643 W. Price Rd.
Brownsville, TX 78520
(956) 544-3022
e-mail: mejia-rose@prodigy.net

Appendix C

In 1998, the TNRCC's work on the U.S.-Mexico border was awarded second place nationwide in the National Pollution Prevention Roundtable's "Most Valuable Pollution Prevention Program - MVP2" Competition. The national award is granted yearly to the most innovative pollution preventive programs in the country. (For more information refer to the TNRCC website: <http://www.tnrcc.state.tx.us/exec/oppr/border/border.html>).

As of December 1998, participating maquiladora's in the volunteer audit program borderwide had reduced their hazardous waste generation by 8,600 tons, nonhazardous waste generation by 52,000 tons, volatile organic compounds (VOCs) by 53,000 pounds and conserved 31 million gallons of water and 10.9 million kWhr. These projects have saved the participating facilities \$8.4 million in material savings and avoided disposal costs. Some examples of pollution prevention activities include:

- *Maquilas are now recycling used oil, thereby decreasing repatriation to the U.S.*
- *Significant decrease in materials being taken to landfills by maquilas.*
- *Maquilas have developed community and school environmental education programs.*
- *Waste disposal costs for participating maquilas drastically reduced.*
- *Maquilas have instituted programs to conserve and reuse water.*
- *Maquilas have changed to water-based cleaners instead of toxic, solvent-based cleaners.*
- *Maquilas now recycling or reusing nonhazardous waste.*
- *Installed more efficient lighting fixtures to save energy.*
- *A maquila installed energy-saving cooling system on the roof using recycled plant water.*
- *Maquilas have reduced use of 55-gallon steel drums.*
- *Maquilas now use recyclable cardboard and plastic pallets instead of wood.*
- *Maquila management has created or expanded pollution prevention programs and in-house environmental teams.*
- *Maquilas have participated with the TNRCC's seminars and sponsored other environmental seminars featuring their pollution prevention projects for affiliates and other maquilas.*
- *Maquilas are undergoing PROFEPA's voluntary environmental audits.*

The TNRCC website features Delphi Rimir, S.A. de C.V. in the Municipio of Matamoros as having developed a comprehensive pollution prevention program. Delphi Rimir employs approximately 850 workers and produces bumpers for several models of GM automobiles. Delphi Rimir has apparently implemented more efficient methods of reclaiming material from the chemical injection process, and of creating lagoons from waste water treatment facilities that stock Japanese koi fish (an exotic species).

Rimir also claims to have prevented the generation of more than nine tons of pathological waste, reduced nonhazardous cardboard, metal and plastic scrap by 7,700 tons, and reduced water consumption by 6.7 million gallons due to treatment and reuse. In implementing these pollution prevention options, Rimir estimates it is saving about \$ 1.7 million a year.

In March 2001 a Tamaulipas state delegation from PROFEPA's recertified Rimir, along with two other Delphi maquilas (then subsidiaries of GM) as "Industria Limpia" or Clean Industry.

Appendix D

Sources of Further Information on Environmentally Sustainable Businesses

A number of organizations can provide information about their specific programs related to sustainable development. The following is a list:

Web Pages:

<http://www.sustainable-busforum.org/gide.htm>
<http://www.shsh.com.au/>
<http://www.applysd.co.uk/>
<http://www.greenchannel.com/tec/sbf.htm>
<http://www.secondnature.org/vision/vision.nsf>
<http://www.afnor.fr/>
<http://www.epa.gov/opptintr/dfe/>
<http://www.iso.ch/meme/TC207.html>
<http://www.oecd.org/subject/sustdeu/>
<http://www.global-amance.org>
<http://www.dol.gov/dol/opa/public/media/press/opa/opa2000116.htm>

Books:

Abrahamson, Dean Edwin (ed). *The Challenge of Global Warning*. Washington, DC Island Press, 1989.

Berger, John. *Restoring the Earth: How Americans are working to Renew Our Damaged Environment*. New York: Anchor Press/Doubleday, 1987.

Cahn, Robert. *Footsteps on the Planet: A Search for an Environmental Ethic*. New York: Universe Books, 1978.

Cohen, Levin. *Coming Full Circle: Successful Recycling Today*. New York; 1988.

Commoner, Barry. *The Poverty of Power: Energy and the Economic Crisis*. New York: Bantam Books, 1977.

Conroy, Czech. *The Greening of Aid: Sustainable Livelihoods in Practice*. London: Earthscan, 1988.

Eckholm, Erik P. *Down to Earth: Environment and Human Needs*. New York: W.W. Norton, 1982.

Global Tomorrow Coalition. *Sustainable Development: A Guide to Our Common Future*. Washington, DC: Global Tomorrow Coalition, 1989.

King, Jonathan. *Troubled Water*. Emmaus, PA: Rodale Press, 1985.

Mintzer, Irving M. *A Matter of Degrees: The potential for Controlling the Greenhouse Effect*. Washington, DC: World Resources Institute, 1987.

Rolston, Holms. *Environmental Ethics: Duties to and Values in the Natural World*. Philadelphia: Temple University Press, 1988.