

A Partnership for Advancing Technology in Colonia Housing (PATCH)

Nasir Gharaibeh, Ph.D., P.E. & Steve Cook

University of Texas at El Paso (UTEP)
Center for Environmental Resource Management/The Energy Center

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University of Texas at El Paso (UTEP)

- **Approximately 19,000 students**
- **Founded in 1913 as the Texas State School of Mines and Metallurgy**
- **Renamed as UTEP in 1967**
- **Seventy bachelor-level programs, 70 master's programs, and 13 doctoral programs**
- **More than \$30 million in annual external research funding**



UTEP Students Today

- 72% are Hispanic
- 54% are first in their families to graduate from university
- 3% are African American
- 10% are Mexican nationals
- Named the No. 1 engineering school for Hispanics in the nation by Hispanic Business Magazine.



THE INCREDIBLE STORY OF THE TEAM THAT CHANGED THE GAME FOREVER.

1966 NCAA CHAMPS
40th ANNIVERSARY
TEXAS WESTERN COLLEGE - UNIVERSITY OF TEXAS AT DALLAS

GLORY ROAD
WINNING CHANGES EVERYTHING

GLORY ROAD

UTEP

Texas Western College

What's a Colonia?

- Spanish word for “neighborhood”
- Communities located within 150 miles of the US-Mexico border that lack safe, sanitary, and sound housing and infrastructure services.
- Colonia population:
 - Low and very low income
 - Majority Hispanic US citizens



Example Colonia House



U.S. Colonias

- Colonias are found in Texas, New Mexico, Arizona and California
- Texas has both the largest number of colonias and the largest colonia population.
 - More than 2,294 Texas colonias
 - Population estimated at 334,194



Emergence of Colonias

- Date back to the 1950s
- Lack of affordable housing
- Developers sold small lots in unincorporated subdivisions with virtually no infrastructure to low-income individuals seeking affordable housing.



Expenses of Colonia Residence

Item	El Paso County Colonias (with Housing Cost)	El Paso County Colonias (without Housing Cost)	Tierra Madre Colonia, NM	Texas	El Paso
Income, \$/mo	\$1,791.0	\$1,652.8	\$2,399.4	\$5,075.3	\$3,759.8
Electricity, \$/mo	\$84.0	\$77.2	\$48.1	\$89.3	\$59.7
Gas, \$/mo	\$61.0	\$55.0	\$29.0	\$34.8	\$35.1
Water, \$/mo	\$105.3	\$83.0	\$23.4	\$40.8	\$31.8
Vehicle Gasoline, \$/mo	\$440.4	\$325.5	\$406.4	\$243.8	\$177.7
Housing, \$/mo	\$262.8	\$8.5	\$325.9	\$1,159.3	\$914.1
Available Balance, \$/mo	\$837.5	\$1,103.5	\$1,566.7	\$3,507.3	\$2,541.4

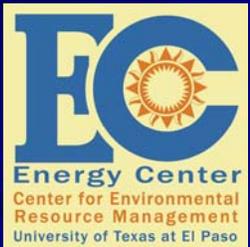


Partnership for Advancing Technology in Colonia Housing (PATCH)

- Partnership between HUD, UTEP, and grass-root non-governmental organizations to provide Colonia residents access to
 - housing technology,
 - housing capital, and
 - knowledge on how to apply both.



PATCH Partners



Colonias Development Council (CDC)



A.Y.U.D.A.



AYUDA: Adults and Youth United Development Association in San Elizario, TX
CDC: Colonias Development Council, organizes in 9 colonias in NM
EPC: El Paso Collaborative for Community and Economic Development

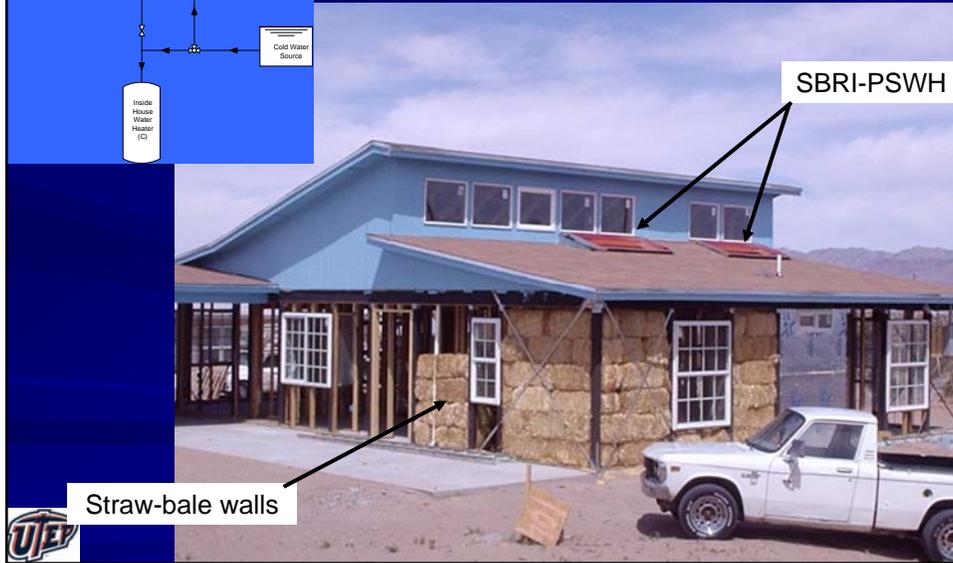
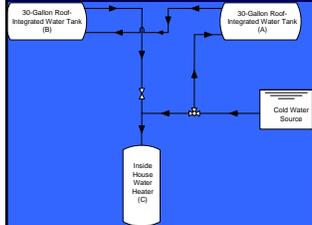


Access to Technology

- **Objective:** Incorporate Energy Star construction and passive solar design in new homes in colonias.
- **Approach:**
 - Design Sight Built Roof Integrated Passive Solar Water Heating (SBRI-PSWH)
 - Implement SBRI-PSWH in 10 new homes in Tierra Madre, NM and 12 new homes in San Elizario, TX
 - Monitor the SBRI-PSWH energy performance
 - Monitor the energy and water consumption in colonia houses



Energy Star Homes (Tierra Madre Home)



Energy Star Homes (Tierra Madre Home)



Energy Star Homes (Tierra Madre Home)

Self-help Construction



Access to Capital

- **Objective:** Establish a pilot program that encourages colonia residents to move towards non-predatory financial sources.
- **Approach:**
 - Revolving layaway loan to pay towards an energy efficient appliance or home improvement. (\$50K; Up to 250 loans/yr)
 - Infrastructure revolving loan to pay toward infrastructures such as water storage tanks, septic systems, and water and gas hook-ups. (\$30K; Up to 20 loans/yr)
 - Hardship grants to pay toward urgent water or energy assistance. (\$15K; ~33 grants)
 - Total of \$95K in capital for colonia residents



Access to Capital (cont.)

- Financial issues are managed by the El Paso Collaborative for Community and Economic Development (EPC).
- EPC is a Community Development Financial Institution (CDFI)
- As a CDFI, EPC serves as the bank and provides financial oversight for the PATCH program.



Access to Knowledge

- Objective: Provide colonia residents with educational tools on how to lower energy bills, manage household technology, and manage finances.
- Approach:
 - Factsheets: 8.5x11 sheets on 6-8 topics related to energy, home technology, financial literacy, and health issues.
 - Flipcharts: 12-16 page publications on financial literacy and household technology.
 - Electronic Publication (CDs)
 - Workshops: provide information on energy efficiency, housing technology, and financial literacy



Education Component of PATCH

Four UTEP students participate in PATCH:

- Josue Machado: M.S. student. graduated in Spring 2006
- Lorena Blanco: Undergraduate student. Graduated in Spring 2006
- Brian Valenzuela: M.S. student. Expected to graduate in Spring 2007
- Pablo Ruiz: Undergraduate student. Expected to graduate in Fall 2006



Research Component of PATCH

- M.S. Thesis by Josue Machado:
 - Assessment of the Housing and Infrastructure Conditions in the El Paso County Colonias
- Journal Paper by Gharaibeh, Machado, and Cook
 - Assessment of the Economic Impact of Inadequate Infrastructures on the Residents of Colonias Along the U.S. Mexico-Border, *Journal of Infrastructure Systems*, ASCE, 2006 (in review).
- M.S. Thesis by Brian Valenzuela (expected):
 - This research focuses on evaluating the affordable housing technology used in the Tierra Madre colonia.



Acknowledgment

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Thank you for your attention!

Questions?

