Rio Bravo Pipeline Fact Sheet

General description
Operated by Next Decade to provide gas to its subsidiary Rio Grande LNG. Rio Grande LNG will further process the fracked gas, liquefy it, and export it in the form of Liquefied Natural Gas (LNG) via tanker ships.

Pipeline specifications (it's actually 2 pipelines)

- Two 42" pipelines that will be parallel to each other.
- 137.3 miles in length from Agua Dulce Hub to Port of Brownsville.
- Right Of Way (ROW): 139.7 total miles, 75 feet wide. Each pipeline will be 25 feet apart.
- Construction for second pipeline is 18 months after completion of first pipeline.
- Normal operating pressure of each pipeline will be approximately 1,350 pounds per square inch (psi) with maximum allowable pressure of 1,480 psi.
- Construction will require a ROW width of 125 feet wide.

Pipelines require more than just pipe! Accompanying infrastructure will include

- 2 interconnect booster stations (both in Kennedy County)
- 3 compressor stations (one in Kleberg, Kennedy, and Cameron County)
- Associated metering stations, 6 valve sites, and access roads.

Compressor stations are large, noisy, and polluting

- Compressor Station 3 in Cameron County near the Port of Brownsville. It is 27 acres large off HWY 48, near the channel cut and across from Bahia Grande.
- It will include six, electric driven rotary natural gas compressor units of 30,000 hp, totaling a maximum capacity of 180,000 hp.
- Compressor stations emit volatile organic compounds and nitrogen oxides, and will at times vent methane directly into the air in an event known as a blow-down creating a loud noise which can be heard from miles away.

Natural Gas Pipeline Compressor Station

Once built, expect more
In the Rio Bravo General Project Description, Resource Report 1 p.63, they state "*growing demand in the region, including demand by the [Rio Grande LNG] Project, is likely to stimulate pipeline system enhancements (e.g., looping, additional compression, installation of larger pipelines) to further increase the throughput capacity of the relevant connecting pipelines or other pipelines that may provide competing transportation for shippers currently using the pipelines to which RB Pipeline will connect.*" In addition, once a pipeline is built, other pipelines often locate near that ROW. Additional pipeline proposals include pipelines for Texas LNG, Annova LNG, and other pipelines that will cross the border to feed gas to Mexico.

Forcing the pipes through private land using eminent domain
Landowners who refuse to allow the pipeline through their property for a sum of money could have their land seized by eminent domain. The Rio Bravo Pipeline alone will impact over 150 landowners in Cameron, Willacy, Kennedy, Kleburg, and Jim Wells Counties. If the other pipelines are built along different routes, they could affect many more families. If the companies decide to co-locate the pipelines along the same route, these people could have four pipeline pumping as much as 9 billion cubic feet per day of gas on their property, in some cases only yards away from their homes.

Big natural gas transmission pipelines could mean big risks

All natural gas pipelines are subject to explosions and leaks. A 42-inch diameter high-pressure gas line could have a blast radius of over half a mile.[1] If the Rio Bravo and Valley Crossing Pipelines parallels Highway 48, that means that the public highway itself and all port businesses would be in the impact zone, as would the sensitive natural areas of San Martin Lake, South Bay and the Bahia Grande. If the proposed LNG export terminals are built, two of them, Rio Grande LNG and Texas LNG would be completely within the half-mile impact zone of the Valley Crossing Pipeline. Both of these facilities transport, store, and handle flammable and explosive chemicals such as propane, ethane, and butane, in addition to vast quantities of LNG. A pipeline rupture alongside the plants would increase the risk of subsequent and, potentially even more devastating, explosions. If the Valley Crossing Pipeline is co-located with the double 42-inch diameter Rio Bravo Pipeline, any blast could trigger multiple line ruptures and an almost unthinkable catastrophe.

Ineffective pipeline safety and risky conditions

Large transmission pipeline accidents do occur. Pipeline failures can result from a number of reasons including external damage, bad welds, or damage during construction or installation. Corrosion is a major cause of pipeline incidents, and the soils in our area are highly corrosive. Texas LNG's own report noted that they would have to consult a corrosion engineer because steel, metal and concrete elements in contact with the soil would be subject to degradation. [2] Pipeline failures are a common occurrence with Texas experiencing pipeline failures more than any other state.

PHMSA Pipeline Incidents: (1997-2016)
Incident Type: All Reported **System Type:** ALL **State:** TEXAS

Calendar Year	Number	Fatalities	Injuries	Total Cost As Reported
1997	71	2	9	$5,695,483
1998	87	3	18	$12,199,787
1999	76	3	15	$12,349,204
2000	82	5	15	$45,799,351
2001	75	0	10	$8,656,968
2002	137	0	4	$8,985,025
2003	148	1	2	$22,103,360
2004	140	1	4	$10,049,957
2005	139	2	3	$99,580,660
2006	158	4	2	$18,661,618
2007	159	2	8	$29,637,707
2008	105	2	6	$61,323,139
2009	147	1	8	$34,468,710
2010	138	2	11	$12,404,678
2011	138	2	7	$59,122,237
2012	149	4	5	$21,576,107
2013	165	1	10	$69,322,019
2014	173	2	3	$34,662,660
2015	221	1	6	$31,501,742
2016	194	2	4	$44,308,791
Grand Total	**2,702**	**40**	**150**	**$642,409,203**

PHMSA Pipeline Incidents: Multi-Year Averages (1997-2016)
Incident Type: All Reported **System Type:** ALL **State:** TEXAS

PHMSA Pipeline Incidents: (1997-2016)
Incident Type: All Reported **System Type:** ALL **State:** ALL

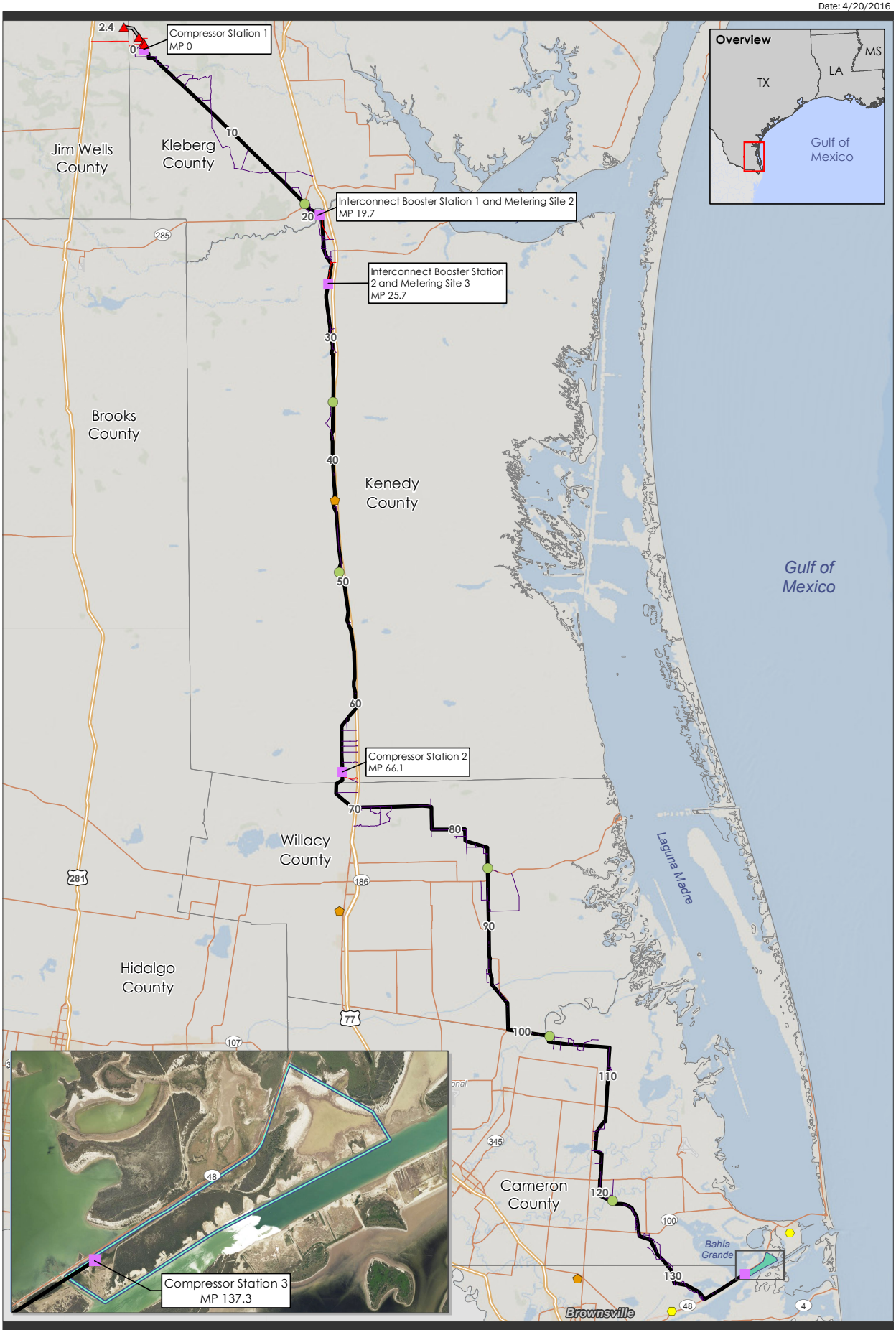
Calendar Year	Number	Fatalities	Injuries	Total Cost As Reported
1997	346	10	77	$79,757,922
1998	389	21	81	$126,851,351
1999	339	22	108	$130,110,339
2000	380	38	81	$191,822,840
2001	341	7	61	$63,092,462
2002	642	12	49	$102,167,588
2003	672	12	71	$139,057,814
2004	671	23	60	$267,836,502
2005	719	17	47	$1,245,463,189
2006	639	21	36	$151,983,767
2007	611	15	49	$153,903,544
2008	659	8	56	$565,519,340
2009	627	13	64	$179,070,183
2010	586	22	108	$1,692,500,877
2011	592	14	56	$426,551,870
2012	573	12	57	$229,613,337
2013	619	9	44	$349,961,947
2014	707	19	95	$310,257,400
2015	715	12	49	$344,188,043
2016	635	17	82	$309,057,836
Grand Total	**11,462**	**324**	**1,331**	**$7,058,768,151**

PHMSA Pipeline Incidents: Multi-Year Averages (1997-2016)
Incident Type: All Reported **System Type:** ALL **State:** ALL

[1] http://www.pipelineawareness.org/wp-content/uploads/2010/06/Evacuation-Distances-for-Natural-Gas.pdf

[2] Texas LNG Docket CP 16-116 Resource Report 6

Date: 4/20/2016



1 Milepost
Meter Site
Mainline Valve
Compressor Station or Interconnect Booster Station/Meter Site
Contractor/Pipe Yard
Temporary Storage Yard
Header System
Pipeline Route
Permanent Access Road
Temporary Access Road
Terminal
N W E S
0 2.5 5 10 Miles

FIGURE 1.2-1
PROJECT LOCATION MAP
RG LNG TERMINAL AND
RB PIPELINE SYSTEM
PROJECTS
Sources: ESRI 2010

Recommended Minimum Evacuation Distances
For
Natural Gas Pipeline Leaks and Ruptures
(Not applicable for Butane, Propane, or other Hazardous Liquids)

Pipeline Size (inches)

Pressure (psig)	4	6	8	10	12	16	20	22	24	30	36	42
100	91	137	182	228	274	365	456	502	547	684	821	958
200	129	193	258	322	387	516	645	709	774	967	1161	1354
300	158	237	316	395	474	632	790	869	948	1185	1422	1659
400	182	274	365	456	547	730	912	1003	1094	1368	1642	1915
500	204	306	408	510	612	816	1020	1122	1224	1529	1835	2141
600	223	335	447	558	670	894	1117	1229	1340	1675	2011	2346
700	241	362	483	603	724	965	1206	1327	1448	1810	2172	2534
800	258	387	516	645	774	1032	1290	1419	1548	1935	2322	2709
900	274	410	547	684	821	1094	1368	1505	1642	2052	2462	2873
1000	288	433	577	721	865	1154	1442	1586	1730	2163	2596	3028
1100	302	454	605	756	907	1210	1512	1664	1815	2269	2722	3176
1200	316	474	632	790	948	1264	1580	1738	1896	2369	2843	3317
1300	329	493	658	822	986	1315	1644	1809	1973	2466	2959	3453
1400	341	512	682	853	1024	1365	1706	1877	2047	2559	3071	3583
1500	353	530	706	883	1060	1413	1766	1943	2119	2649	3179	3709
1600	365	547	730	912	1094	1459	1824	2006	2189	2736	3283	3830
1700	376	564	752	940	1128	1504	1880	2068	2256	2820	3384	3948
1800	387	580	774	967	1161	1548	1935	2128	2322	2902	3482	4063
1900	398	596	795	994	1193	1590	1988	2186	2385	2981	3578	4174
2000	408	612	816	1020	1224	1631	2039	2243	2447	3059	3671	4283
2100	418	627	836	1045	1254	1672	2090	2299	2508	3134	3761	4388
2200	428	642	856	1069	1283	1711	2139	2353	2567	3208	3850	4492

Rio Bravo Pipeline

Table 1 - Evacuation Distance in Feet

The applicable leak or rupture condition is that of a sustained trench fire fueled by non-toxic natural gas escaping from two full bore pipe ends. Blast overpressure is not addressed. The distances shown in Table 1 are intended to provide protection from burn injury and correspond to a thermal heat flux exposure level of 450 Btu/hr ft^2. This is the accepted limit of heat exposure for unprotected outdoor areas where people congregate; as established by the US Department of Housing & Development Code 24CFR51, Subpart C, Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature. The formula used to calculate distance was taken from the Gas Research Institute Report GRI-00/0189, *A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines*, 2001, prepared by C-FER Technologies. That model does not take into account wind or other factors which may greatly influence specific conditions. Users are advised that the distances shown in Table 1 are considered to be "general information" only and are not intended to replace a site specific risk analysis. The Pipeline Association for Public Awareness makes no warranty with respect to the usefulness of this information and assumes no liability for any and all damages resulting from its use. Anyone using this information does so at their own risk.

Here is what you can do. It's fast and easy!

1. Send a comment to the Federal Energy Regulatory Commission (FERC). 3 hard copy forms have been included for you. State your concerns and objections to the Rio Bravo Pipeline and Rio Grande LNG and mail it in.

2. Encourage other family members and friends to send in comments to FERC.

3. Go to https://www.ran.org/frackedgas and sign the petition to help stop banks from financing the project.

Need more information?

- saveRGVfromLNG.com

- https://www.sierraclub.org/texas/lower-rio-grande-valley

Want to do more?

1. Contact your elected officials (city, county, state, federal) and tell them your concerns and opposition to the Rio Bravo Pipeline and Rio Grande LNG. It could even be the same thing you sent to FERC!

2. Contact the press. Several people have been on the news stating their concerns and opposition about the Valley Crossing Pipeline near their home. You can also write letters to the editor in the newspaper.

3. Stay up to date, get involved, and join other individuals trying to stop pipelines and LNG.

    - Join Save RGV From LNG on Facebook

    - Join the Lower Rio Grande Valley Sierra Club on Facebook and Twitter.

FEDERAL ENERGY REGULATORY COMMISSION

RIO GRANDE LNG PROJECT (DOCKET NO. CP16-454-000);

RIO BRAVO PIPELINE (DOCKET NO. CP16-455-000)

Comments can be: (1) left with a FERC representative; (2) mailed to the addresses below **or** (3) electronically filed[1].

Please send copies referenced to the address below:

For Official Filing:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

COMMENTS: (PLEASE PRINT) [*continue on back of page if necessary*]

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Commenter's Name and Mailing Address **(Please Print)**

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[1]**The Commission encourages electronic filing of comments.** See 18 Code of Federal Regulations 385.2001(a)(1)(iii) and the instructions on the Commission's Internet website at http://www.ferc.gov under the link to "Documents and Filings" and "eFiling." eFiling is a file attachment process and requires that you prepare your submission in the same manner as you would if filing on paper, and save it to a file on your hard drive. New eFiling users must first create an account by clicking on "Sign up" or "eRegister." You will be asked to select the type of filing you are making. This filing is considered a "Comment on Filing." All comments submitted under eFiling are placed in the public record for the specified docket or project number(s).

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