Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc.
Project: GNEP

Lab Order: 0703134

Lab ID: 0703134-04
Client Sample ID: P-2

Collection Date: 3/10/2007 5:10:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: TES
Fluoride	ND	10		mg/L	100	3/20/2007 2:37:17 PM
Chloride	40000	500		mg/L	5000	3/12/2007 11:05:27 PM
Bromide	120	20		mg/L	200	3/20/2007 2:54:42 PM
Nitrate (As N)+Nitrite (As N)	ND	50		mg/L	500	3/20/2007 3:12:07 PM
Sulfate	14000	250		mg/L	500	3/15/2007 4:47:07 AM
EPA METHOD 7470: MERCURY						Analyst: MAP
Mercury	ND	0.0020		mg/L	1	3/24/2007
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: NMO
Aluminum	1.3	1.0		mg/L	5	3/20/2007 12:25:23 PM
Barium	ND	0.20		mg/L	1	3/16/2007 2:17:23 PM
Beryllium	ND	0.030		mg/L	1	3/16/2007 2:17:23 PM
Boron	2.0	0.40		mg/L	1	3/16/2007 2:17:23 PM
Cadmium	ND	0.020		mg/L	1	3/16/2007 2:17:23 PM
Calcium	990	50		mg/L	5	3/20/2007 12:25:23 PM
Chromium	ND	0.060		mg/L	1	3/16/2007 2:17:23 PM
Cobalt	ND	0.060		mg/L	1	3/16/2007 2:17:23 PM
Copper	ND	0.060		mg/L	1	3/16/2007 2:17:23 PM
Iron	ND	2.5		mg/L	5	3/20/2007 12:25:23 PM
Lead	ND	0.050		mg/L	1	3/16/2007 2:17:23 PM
Magnesium	3600	50		mg/L	5	3/20/2007 12:25:23 PM
Manganese	1.0	0.020		mg/L	1	3/16/2007 2:17:23 PM
Molybdenum	ND	0.080		mg/L	1	3/16/2007 2:17:23 PM
Nickel	ND	0.10		mg/L	1	3/16/2007 2:17:23 PM
Potassium	210	10		mg/L	1	3/16/2007 2:17:23 PM
Silver	ND	0.25		mg/L	5	3/20/2007 12:25:23 PM
Sodium	30000	1000		mg/L	100	3/20/2007 12:06:22 PM
Vanadium	ND	0.50		mg/L	1	3/16/2007 2:17:23 PM
Zinc	ND	0.50		mg/L	1	3/16/2007 2:17:23 PM
EPA METHOD 8260B: VOLATILES						Analyst: LMM
Iodomethane	ND	400		µg/L	10	3/20/2007
trans-1,4-Dichloro-2-butene	ND	1000		µg/L	10	3/20/2007
Vinyl Acetate	ND	500		µg/L	10	3/20/2007
Benzene	ND	10		µg/L	10	3/20/2007
Toluene	ND	10		µg/L	10	3/20/2007
Ethylbenzene	ND	10		µg/L	10	3/20/2007
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/20/2007
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/20/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

14/92

Page 13 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES Analyst: LMM

1,3,5-Trimethylbenzene	ND	10	µg/L	10	3/20/2007
1,2-Dichloroethane (EDC)	ND	10	µg/L	10	3/20/2007
1,2-Dibromoethane (EDB)	ND	10	µg/L	10	3/20/2007
Naphthalene	ND	20	µg/L	10	3/20/2007
1-Methylnaphthalene	ND	40	µg/L	10	3/20/2007
2-Methylnaphthalene	ND	40	µg/L	10	3/20/2007
Acetone	ND	100	µg/L	10	3/20/2007
Acrylonitrile	ND	2000	µg/L	10	3/20/2007
Bromobenzene	ND	10	µg/L	10	3/20/2007
Bromochloromethane	ND	10	µg/L	10	3/20/2007
Bromodichloromethane	ND	10	µg/L	10	3/20/2007
Bromoform	ND	10	µg/L	10	3/20/2007
Bromomethane	ND	10	µg/L	10	3/20/2007
2-Butanone	ND	100	µg/L	10	3/20/2007
Carbon disulfide	ND	100	µg/L	10	3/20/2007
Carbon Tetrachloride	ND	10	µg/L	10	3/20/2007
Chlorobenzene	ND	10	µg/L	10	3/20/2007
Chloroethane	ND	20	µg/L	10	3/20/2007
Chloroform	ND	10	µg/L	10	3/20/2007
Chloromethane	ND	10	µg/L	10	3/20/2007
2-Chlorotoluene	ND	10	µg/L	10	3/20/2007
4-Chlorotoluene	ND	10	µg/L	10	3/20/2007
cis-1,2-DCE	ND	10	µg/L	10	3/20/2007
cis-1,3-Dichloropropene	ND	10	µg/L	10	3/20/2007
1,2-Dibromo-3-chloropropane	ND	20	µg/L	10	3/20/2007
Dibromochloromethane	ND	10	µg/L	10	3/20/2007
Dibromomethane	ND	10	µg/L	10	3/20/2007
1,2-Dichlorobenzene	ND	10	µg/L	10	3/20/2007
1,3-Dichlorobenzene	ND	10	µg/L	10	3/20/2007
1,4-Dichlorobenzene	ND	10	µg/L	10	3/20/2007
Dichlorodifluoromethane	ND	10	µg/L	10	3/20/2007
1,1-Dichloroethane	ND	10	µg/L	10	3/20/2007
1,1-Dichloroethene	ND	10	µg/L	10	3/20/2007
1,2-Dichloropropane	ND	10	µg/L	10	3/20/2007
1,3-Dichloropropane	ND	10	µg/L	10	3/20/2007
2,2-Dichloropropane	ND	20	µg/L	10	3/20/2007
1,1-Dichloropropene	ND	10	µg/L	10	3/20/2007
Hexachlorobutadiene	ND	10	µg/L	10	3/20/2007
2-Hexanone	ND	100	µg/L	10	3/20/2007
Isopropylbenzene	ND	10	µg/L	10	3/20/2007
4-Isopropyltoluene	ND	10	µg/L	10	3/20/2007
4-Methyl-2-pentanone	ND	100	µg/L	10	3/20/2007
Methylene Chloride	ND	10	µg/L	10	3/20/2007
n-Butylbenzene	ND	10	µg/L	10	3/20/2007
n-Propylbenzene	ND	10	µg/L	10	3/20/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits 15 / 92

Page 14 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES					Analyst: LMM
sec-Butylbenzene	ND	10	µg/L	10	3/20/2007
Styrene	ND	10	µg/L	10	3/20/2007
tert-Butylbenzene	ND	10	µg/L	10	3/20/2007
1,1,1,2-Tetrachloroethane	ND	10	µg/L	10	3/20/2007
1,1,2,2-Tetrachloroethane	ND	20	µg/L	10	3/20/2007
Tetrachloroethene (PCE)	ND	10	µg/L	10	3/20/2007
trans-1,2-DCE	ND	10	µg/L	10	3/20/2007
trans-1,3-Dichloropropene	ND	10	µg/L	10	3/20/2007
1,2,3-Trichlorobenzene	ND	10	µg/L	10	3/20/2007
1,2,4-Trichlorobenzene	ND	10	µg/L	10	3/20/2007
1,1,1-Trichloroethane	ND	10	µg/L	10	3/20/2007
1,1,2-Trichloroethane	ND	10	µg/L	10	3/20/2007
Trichloroethene (TCE)	ND	10	µg/L	10	3/20/2007
Trichlorofluoromethane	ND	10	µg/L	10	3/20/2007
1,2,3-Trichloropropane	ND	20	µg/L	10	3/20/2007
Vinyl chloride	ND	10	µg/L	10	3/20/2007
Xylenes, Total	ND	15	µg/L	10	3/20/2007
Surr: 1,2-Dichloroethane-d4	100	76.6-113	%REC	10	3/20/2007
Surr: 4-Bromofluorobenzene	106	77-117	%REC	10	3/20/2007
Surr: Dibromofluoromethane	95.5	72.3-121	%REC	10	3/20/2007
Surr: Toluene-d8	99.8	73-113	%REC	10	3/20/2007
EPA METHOD 310.1: ALKALINITY					Analyst: KS
Alkalinity, Total (As CaCO3)	120	2.0	mg/L CaCO3	1	3/22/2007
Carbonate	ND	2.0	mg/L CaCO3	1	3/22/2007
Bicarbonate	120	2.0	mg/L CaCO3	1	3/22/2007
EPA 120.1: SPECIFIC CONDUCTANCE					Analyst: MAP
Specific Conductance	170000	0.25	µmhos/cm	25	3/20/2007
EPA METHOD 350.2: NH3					Analyst: MAP
Ammonia	1.4	0.50	mg/L	1	3/26/2007
TOTAL NITROGEN					Analyst: MAP
Nitrogen, Total	2.1	1.0	mg/L	1	3/26/2007
EPA METHOD 150.1: PH					Analyst: TES
pH	7.26	0.010	pH units	1	3/15/2007
SPECIFIC GRAVITY					Analyst: MAP
Specific Gravity	1.0	0		1	3/23/2003
EPA METHOD 160.1: TDS					Analyst: KS
Total Dissolved Solids	83000	200	mg/L	1	3/16/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

16/92

Page 15 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 351.3: TKN					**Analyst: MAP**
Nitrogen, Kjeldahl, Total	ND	5.0	mg/L	1	3/23/2007
EPA METHOD 160.2: TSS					**Analyst: KS**
Suspended Solids	270	10	mg/L	1	3/16/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits		

17/92

Page 16 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-05 **Collection Date:** 3/10/2007 8:37:00 AM
Client Sample ID: S-1 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						Analyst: SCG
4,4'-DDD	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
4,4'-DDE	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
4,4'-DDT	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Aldrin	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
alpha-BHC	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
beta-BHC	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Chlordane	ND	10		mg/Kg	10	3/28/2007 4:35:40 AM
delta-BHC	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Dieldrin	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Endosulfan I	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Endosulfan II	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Endosulfan sulfate	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Endrin	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Endrin aldehyde	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
gamma-BHC	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Heptachlor	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Heptachlor epoxide	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Methoxychlor	ND	0.080		mg/Kg	10	3/28/2007 4:35:40 AM
Toxaphene	ND	10		mg/Kg	10	3/28/2007 4:35:40 AM
Surr: Decachlorobiphenyl	96.0	56.9-154		%REC	10	3/28/2007 4:35:40 AM
Surr: Tetrachloro-m-xylene	76.0	51.5-116		%REC	10	3/28/2007 4:35:40 AM
EPA METHOD 8082: PCB'S						Analyst: JAT
Aroclor 1016	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1221	ND	10		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1232	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1242	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1248	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1254	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Aroclor 1260	ND	0.80		mg/Kg	10	3/23/2007 10:56:31 PM
Surr: Decachlorobiphenyl	52.0	50.1-115		%REC	10	3/23/2007 10:56:31 PM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	ND	18		mg/Kg	50	3/26/2007 9:18:21 PM
1-Methylnaphthalene	ND	18		mg/Kg	50	3/26/2007 9:18:21 PM
2-Methylnaphthalene	ND	18		mg/Kg	50	3/26/2007 9:18:21 PM
Acenaphthylene	ND	18		mg/Kg	50	3/26/2007 9:18:21 PM
Acenaphthene	ND	18		mg/Kg	50	3/26/2007 9:18:21 PM
Fluorene	ND	2.1		mg/Kg	50	3/26/2007 9:18:21 PM
Phenanthrene	5.2	1.1		mg/Kg	50	3/26/2007 9:18:21 PM

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

18/92

Page 17 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8310: PAHS						Analyst: JMP
Anthracene	ND	1.1		mg/Kg	50	3/26/2007 9:18:21 PM
Fluoranthene	ND	1.4		mg/Kg	50	3/26/2007 9:18:21 PM
Pyrene	ND	1.8		mg/Kg	50	3/26/2007 9:18:21 PM
Benz(a)anthracene	ND	0.14		mg/Kg	50	3/26/2007 9:18:21 PM
Chrysene	ND	0.79		mg/Kg	50	3/26/2007 9:18:21 PM
Benzo(b)fluoranthene	ND	0.29		mg/Kg	50	3/26/2007 9:18:21 PM
Benzo(k)fluoranthene	ND	0.071		mg/Kg	50	3/26/2007 9:18:21 PM
Benzo(a)pyrene	ND	0.071		mg/Kg	50	3/26/2007 9:18:21 PM
Dibenz(a,h)anthracene	ND	0.21		mg/Kg	50	3/26/2007 9:18:21 PM
Benzo(g,h,i)perylene	0.43	0.21		mg/Kg	50	3/26/2007 9:18:21 PM
Indeno(1,2,3-cd)pyrene	ND	0.29		mg/Kg	50	3/26/2007 9:18:21 PM
Surr: Benzo(e)pyrene	125	52.8-123	S	%REC	50	3/26/2007 9:18:21 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	7300	30		mg/Kg	100	3/21/2007 2:20:42 PM
EPA METHOD 7471: MERCURY						Analyst: MAP
Mercury	0.13	0.033		mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS						Analyst: NMO
Arsenic	30	2.5		mg/Kg	1	3/27/2007 9:17:43 AM
Barium	360	2.0		mg/Kg	20	3/27/2007 10:43:34 AM
Cadmium	ND	0.10		mg/Kg	1	3/27/2007 9:17:43 AM
Chromium	110	6.0		mg/Kg	20	3/27/2007 10:43:34 AM
Lead	220	5.0		mg/Kg	20	3/27/2007 10:43:34 AM
Selenium	ND	2.5		mg/Kg	1	3/27/2007 9:17:43 AM
Silver	ND	0.25		mg/Kg	1	3/27/2007 9:17:43 AM
Thallium	ND	2.5		mg/Kg	1	3/27/2007 9:17:43 AM
Uranium	ND	5.0		mg/Kg	1	3/27/2007 9:17:43 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	40		mg/Kg	20	3/22/2007
Acenaphthylene	ND	40		mg/Kg	20	3/22/2007
Aniline	ND	40		mg/Kg	20	3/22/2007
Anthracene	ND	40		mg/Kg	20	3/22/2007
Azobenzene	ND	40		mg/Kg	20	3/22/2007
Benz(a)anthracene	ND	50		mg/Kg	20	3/22/2007
Benzo(a)pyrene	ND	40		mg/Kg	20	3/22/2007
Benzo(b)fluoranthene	ND	40		mg/Kg	20	3/22/2007
Benzo(g,h,i)perylene	ND	60		mg/Kg	20	3/22/2007
Benzo(k)fluoranthene	ND	100		mg/Kg	20	3/22/2007
Benzoic acid	ND	100		mg/Kg	20	3/22/2007
Benzyl alcohol	ND	200		mg/Kg	20	3/22/2007
Bis(2-chloroethoxy)methane	ND	100		mg/Kg	20	3/22/2007
Bis(2-chloroethyl)ether	ND	50		mg/Kg	20	3/22/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

19/92

Page 18 of 54

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES Analyst: BL

Bis(2-chloroisopropyl)ether	ND	100	mg/Kg	20	3/22/2007
Bis(2-ethylhexyl)phthalate	ND	40	mg/Kg	20	3/22/2007
4-Bromophenyl phenyl ether	ND	50	mg/Kg	20	3/22/2007
Butyl benzyl phthalate	ND	40	mg/Kg	20	3/22/2007
Carbazole	ND	40	mg/Kg	20	3/22/2007
4-Chloro-3-methylphenol	ND	40	mg/Kg	20	3/22/2007
4-Chloroaniline	ND	40	mg/Kg	20	3/22/2007
2-Chloronaphthalene	ND	40	mg/Kg	20	3/22/2007
2-Chlorophenol	ND	40	mg/Kg	20	3/22/2007
4-Chlorophenyl phenyl ether	ND	40	mg/Kg	20	3/22/2007
Chrysene	ND	40	mg/Kg	20	3/22/2007
Di-n-butyl phthalate	ND	100	mg/Kg	20	3/22/2007
Di-n-octyl phthalate	ND	100	mg/Kg	20	3/22/2007
Dibenz(a,h)anthracene	ND	50	mg/Kg	20	3/22/2007
Dibenzofuran	ND	100	mg/Kg	20	3/22/2007
1,2-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
1,3-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
1,4-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
3,3'-Dichlorobenzidine	ND	40	mg/Kg	20	3/22/2007
Diethyl phthalate	ND	40	mg/Kg	20	3/22/2007
Dimethyl phthalate	ND	40	mg/Kg	20	3/22/2007
2,4-Dichlorophenol	ND	40	mg/Kg	20	3/22/2007
2,4-Dimethylphenol	ND	40	mg/Kg	20	3/22/2007
4,6-Dinitro-2-methylphenol	ND	100	mg/Kg	20	3/22/2007
2,4-Dinitrophenol	ND	100	mg/Kg	20	3/22/2007
2,4-Dinitrotoluene	ND	40	mg/Kg	20	3/22/2007
2,6-Dinitrotoluene	ND	40	mg/Kg	20	3/22/2007
Fluoranthene	ND	40	mg/Kg	20	3/22/2007
Fluorene	ND	40	mg/Kg	20	3/22/2007
Hexachlorobenzene	ND	40	mg/Kg	20	3/22/2007
Hexachlorobutadiene	ND	40	mg/Kg	20	3/22/2007
Hexachlorocyclopentadiene	ND	50	mg/Kg	20	3/22/2007
Hexachloroethane	ND	100	mg/Kg	20	3/22/2007
Indeno(1,2,3-cd)pyrene	ND	40	mg/Kg	20	3/22/2007
Isophorone	ND	40	mg/Kg	20	3/22/2007
2-Methylnaphthalene	ND	40	mg/Kg	20	3/22/2007
2-Methylphenol	ND	40	mg/Kg	20	3/22/2007
3+4-Methylphenol	ND	40	mg/Kg	20	3/22/2007
N-Nitrosodi-n-propylamine	ND	40	mg/Kg	20	3/22/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	20	3/22/2007
N-Nitrosodiphenylamine	ND	40	mg/Kg	20	3/22/2007
Naphthalene	ND	40	mg/Kg	20	3/22/2007
2-Nitroaniline	ND	100	mg/Kg	20	3/22/2007
3-Nitroaniline	ND	100	mg/Kg	20	3/22/2007
4-Nitroaniline	ND	50	mg/Kg	20	3/22/2007

Qualifiers:
- `*` Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

20 / 92

Page 19 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Nitrobenzene	ND	40		mg/Kg	20	3/22/2007
2-Nitrophenol	ND	40		mg/Kg	20	3/22/2007
4-Nitrophenol	ND	40		mg/Kg	20	3/22/2007
Pentachlorophenol	ND	100		mg/Kg	20	3/22/2007
Phenanthrene	ND	40		mg/Kg	20	3/22/2007
Phenol	ND	40		mg/Kg	20	3/22/2007
Pyrene	ND	40		mg/Kg	20	3/22/2007
Pyridine	ND	100		mg/Kg	20	3/22/2007
1,2,4-Trichlorobenzene	ND	40		mg/Kg	20	3/22/2007
2,4,5-Trichlorophenol	ND	40		mg/Kg	20	3/22/2007
2,4,6-Trichlorophenol	ND	40		mg/Kg	20	3/22/2007
Surr: 2,4,6-Tribromophenol	360	35.5-141	S	%REC	20	3/22/2007
Surr: 2-Fluorobiphenyl	0	30.4-128	S	%REC	20	3/22/2007
Surr: 2-Fluorophenol	274	28.1-129	S	%REC	20	3/22/2007
Surr: 4-Terphenyl-d14	0	34.6-151	S	%REC	20	3/22/2007
Surr: Nitrobenzene-d5	0	26.5-122	S	%REC	20	3/22/2007
Surr: Phenol-d5	0	37.6-118	S	%REC	20	3/22/2007

EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	ND	0.050		mg/Kg	1	3/15/2007
Toluene	ND	0.050		mg/Kg	1	3/15/2007
Ethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	3/15/2007
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	3/15/2007
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	3/15/2007
Naphthalene	ND	0.10		mg/Kg	1	3/15/2007
1-Methylnaphthalene	ND	0.20		mg/Kg	1	3/15/2007
2-Methylnaphthalene	ND	0.20		mg/Kg	1	3/15/2007
Acetone	ND	0.75		mg/Kg	1	3/15/2007
Bromobenzene	ND	0.050		mg/Kg	1	3/15/2007
Bromochloromethane	ND	0.050		mg/Kg	1	3/15/2007
Bromodichloromethane	ND	0.050		mg/Kg	1	3/15/2007
Bromoform	ND	0.050		mg/Kg	1	3/15/2007
Bromomethane	ND	0.10		mg/Kg	1	3/15/2007
2-Butanone	ND	0.50		mg/Kg	1	3/15/2007
Carbon disulfide	ND	0.50		mg/Kg	1	3/15/2007
Carbon tetrachloride	ND	0.10		mg/Kg	1	3/15/2007
Chlorobenzene	ND	0.050		mg/Kg	1	3/15/2007
Chloroethane	ND	0.10		mg/Kg	1	3/15/2007
Chloroform	ND	0.050		mg/Kg	1	3/15/2007
Chloromethane	ND	0.050		mg/Kg	1	3/15/2007
2-Chlorotoluene	ND	0.050		mg/Kg	1	3/15/2007
4-Chlorotoluene	ND	0.050		mg/Kg	1	3/15/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

21/92

Page 20 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES					Analyst: SMP
cis-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	3/15/2007
Dibromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Dibromomethane	ND	0.10	mg/Kg	1	3/15/2007
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,1-Dichloroethane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloroethene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
2,2-Dichloropropane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloropropene	ND	0.10	mg/Kg	1	3/15/2007
Hexachlorobutadiene	ND	0.10	mg/Kg	1	3/15/2007
2-Hexanone	ND	0.50	mg/Kg	1	3/15/2007
Isopropylbenzene	ND	0.050	mg/Kg	1	3/15/2007
4-Isopropyltoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	3/15/2007
Methylene chloride	ND	0.15	mg/Kg	1	3/15/2007
n-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
n-Propylbenzene	ND	0.050	mg/Kg	1	3/15/2007
sec-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Styrene	ND	0.050	mg/Kg	1	3/15/2007
tert-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	3/15/2007
trans-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	3/15/2007
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	3/15/2007
Trichlorofluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	3/15/2007
Vinyl chloride	ND	0.050	mg/Kg	1	3/15/2007
Xylenes, Total	ND	0.10	mg/Kg	1	3/15/2007
Surr: 1,2-Dichloroethane-d4	86.6	62.1-102	%REC	1	3/15/2007
Surr: 4-Bromofluorobenzene	98.1	72-107	%REC	1	3/15/2007
Surr: Dibromofluoromethane	95.3	56.6-105	%REC	1	3/15/2007
Surr: Toluene-d8	96.0	83.4-104	%REC	1	3/15/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

22 / 92

Page 21 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2					**Analyst: ADN**
Oil & Grease, Total Recoverable	94000	4000	mg/Kg	100	3/23/2007
EPA METHOD 418.1: TPH					**Analyst: BL**
Petroleum Hydrocarbons, TR	68000	4000	mg/Kg	100	3/23/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits 23/92		Page 22 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-06 **Collection Date:** 3/10/2007 8:50:00 AM
Client Sample ID: S-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						**Analyst: SCC**
4,4'-DDD	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
4,4'-DDE	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
4,4'-DDT	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Aldrin	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
alpha-BHC	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
beta-BHC	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Chlordane	ND	0.25		mg/Kg	1	3/24/2007 2:18:19 AM
delta-BHC	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Dieldrin	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Endosulfan I	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Endosulfan II	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Endosulfan sulfate	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Endrin	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Endrin aldehyde	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
gamma-BHC	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Heptachlor	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Heptachlor epoxide	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Methoxychlor	ND	0.0020		mg/Kg	1	3/24/2007 2:18:19 AM
Toxaphene	ND	0.25		mg/Kg	1	3/24/2007 2:18:19 AM
Surr: Decachlorobiphenyl	115	56.9-154		%REC	1	3/24/2007 2:18:19 AM
Surr: Tetrachloro-m-xylene	103	51.5-116		%REC	1	3/24/2007 2:18:19 AM
EPA METHOD 8082: PCB'S						**Analyst: JAT**
Aroclor 1016	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1221	ND	0.25		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1232	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1242	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1248	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1254	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Aroclor 1260	ND	0.020		mg/Kg	1	3/15/2007 9:33:07 AM
Surr: Decachlorobiphenyl	94.4	50.1-116		%REC	1	3/15/2007 9:33:07 AM
EPA METHOD 8310: PAHS						**Analyst: JMP**
Naphthalene	ND	0.25		mg/Kg	1	3/28/2007 1:43:11 PM
1-Methylnaphthalene	ND	0.25		mg/Kg	1	3/28/2007 1:43:11 PM
2-Methylnaphthalene	ND	0.25		mg/Kg	1	3/28/2007 1:43:11 PM
Acenaphthylene	ND	0.25		mg/Kg	1	3/28/2007 1:43:11 PM
Acenaphthene	ND	0.25		mg/Kg	1	3/28/2007 1:43:11 PM
Fluorene	ND	0.030		mg/Kg	1	3/28/2007 1:43:11 PM
Phenanthrene	ND	0.015		mg/Kg	1	3/28/2007 1:43:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

24 / 92

Page 23 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8310: PAHS					Analyst: JMP
Anthracene	ND	0.015	mg/Kg	1	3/28/2007 1:43:11 PM
Fluoranthene	ND	0.020	mg/Kg	1	3/28/2007 1:43:11 PM
Pyrene	ND	0.025	mg/Kg	1	3/28/2007 1:43:11 PM
Benz(a)anthracene	ND	0.0020	mg/Kg	1	3/28/2007 1:43:11 PM
Chrysene	ND	0.011	mg/Kg	1	3/28/2007 1:43:11 PM
Benzo(b)fluoranthene	ND	0.0040	mg/Kg	1	3/28/2007 1:43:11 PM
Benzo(k)fluoranthene	ND	0.0010	mg/Kg	1	3/28/2007 1:43:11 PM
Benzo(a)pyrene	ND	0.0010	mg/Kg	1	3/28/2007 1:43:11 PM
Dibenz(a,h)anthracene	ND	0.0030	mg/Kg	1	3/28/2007 1:43:11 PM
Benzo(g,h,i)perylene	ND	0.0030	mg/Kg	1	3/28/2007 1:43:11 PM
Indeno(1,2,3-cd)pyrene	ND	0.0040	mg/Kg	1	3/28/2007 1:43:11 PM
Surr: Benzo(e)pyrene	75.7	52.8-123	%REC	1	3/28/2007 1:43:11 PM
EPA METHOD 9056A: ANIONS					Analyst: TES
Chloride	43000	150	mg/Kg	500	3/21/2007 3:02:32 PM
EPA METHOD 7471: MERCURY					Analyst: MAP
Mercury	ND	0.033	mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS					Analyst: NMO
Arsenic	5.3	2.5	mg/Kg	1	3/27/2007 9:21:17 AM
Barium	60	1.0	mg/Kg	10	3/27/2007 10:46:30 AM
Cadmium	ND	0.10	mg/Kg	1	3/27/2007 9:21:17 AM
Chromium	5.4	0.30	mg/Kg	1	3/27/2007 9:21:17 AM
Lead	0.79	0.25	mg/Kg	1	3/27/2007 9:21:17 AM
Selenium	ND	2.5	mg/Kg	1	3/27/2007 9:21:17 AM
Silver	ND	0.25	mg/Kg	1	3/27/2007 9:21:17 AM
Thallium	ND	2.5	mg/Kg	1	3/27/2007 9:21:17 AM
Uranium	ND	5.0	mg/Kg	1	3/27/2007 9:21:17 AM
EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Acenaphthene	ND	0.20	mg/Kg	1	3/22/2007
Acenaphthylene	ND	0.20	mg/Kg	1	3/22/2007
Aniline	ND	0.20	mg/Kg	1	3/22/2007
Anthracene	ND	0.20	mg/Kg	1	3/22/2007
Azobenzene	ND	0.20	mg/Kg	1	3/22/2007
Benz(a)anthracene	ND	0.25	mg/Kg	1	3/22/2007
Benzo(a)pyrene	ND	0.20	mg/Kg	1	3/22/2007
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	3/22/2007
Benzo(g,h,i)perylene	ND	0.30	mg/Kg	1	3/22/2007
Benzo(k)fluoranthene	ND	0.50	mg/Kg	1	3/22/2007
Benzoic acid	ND	0.50	mg/Kg	1	3/22/2007
Benzyl alcohol	ND	1.0	mg/Kg	1	3/22/2007
Bis(2-chloroethoxy)methane	ND	0.50	mg/Kg	1	3/22/2007
Bis(2-chloroethyl)ether	ND	0.25	mg/Kg	1	3/22/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

25/92

Page 24 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES Analyst: BL

Bis(2-chloroisopropyl)ether	ND	0.50	mg/Kg	1	3/22/2007
Bis(2-ethylhexyl)phthalate	ND	0.20	mg/Kg	1	3/22/2007
4-Bromophenyl phenyl ether	ND	0.25	mg/Kg	1	3/22/2007
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
Carbazole	ND	0.20	mg/Kg	1	3/22/2007
4-Chloro-3-methylphenol	ND	0.20	mg/Kg	1	3/22/2007
4-Chloroaniline	ND	0.20	mg/Kg	1	3/22/2007
2-Chloronaphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Chlorophenol	ND	0.20	mg/Kg	1	3/22/2007
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	3/22/2007
Chrysene	ND	0.20	mg/Kg	1	3/22/2007
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	3/22/2007
Di-n-octyl phthalate	ND	0.50	mg/Kg	1	3/22/2007
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	3/22/2007
Dibenzofuran	ND	0.50	mg/Kg	1	3/22/2007
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
3,3'-Dichlorobenzidine	ND	0.20	mg/Kg	1	3/22/2007
Diethyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
Dimethyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
2,4-Dichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
2,4-Dimethylphenol	ND	0.20	mg/Kg	1	3/22/2007
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	3/22/2007
2,4-Dinitrophenol	ND	0.50	mg/Kg	1	3/22/2007
2,4-Dinitrotoluene	ND	0.20	mg/Kg	1	3/22/2007
2,6-Dinitrotoluene	ND	0.20	mg/Kg	1	3/22/2007
Fluoranthene	ND	0.20	mg/Kg	1	3/22/2007
Fluorene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorobutadiene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	3/22/2007
Hexachloroethane	ND	0.50	mg/Kg	1	3/22/2007
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg	1	3/22/2007
Isophorone	ND	0.20	mg/Kg	1	3/22/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Methylphenol	ND	0.20	mg/Kg	1	3/22/2007
3+4-Methylphenol	ND	0.20	mg/Kg	1	3/22/2007
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	3/22/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	1	3/22/2007
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	3/22/2007
Naphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Nitroaniline	ND	0.50	mg/Kg	1	3/22/2007
3-Nitroaniline	ND	0.50	mg/Kg	1	3/22/2007
4-Nitroaniline	ND	0.25	mg/Kg	1	3/22/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

26 / 92

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Nitrobenzene	ND	0.20	mg/Kg	1	3/22/2007
2-Nitrophenol	ND	0.20	mg/Kg	1	3/22/2007
4-Nitrophenol	ND	0.20	mg/Kg	1	3/22/2007
Pentachlorophenol	ND	0.50	mg/Kg	1	3/22/2007
Phenanthrene	ND	0.20	mg/Kg	1	3/22/2007
Phenol	ND	0.20	mg/Kg	1	3/22/2007
Pyrene	ND	0.20	mg/Kg	1	3/22/2007
Pyridine	ND	0.50	mg/Kg	1	3/22/2007
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
Surr: 2,4,6-Tribromophenol	82.4	35.5-141	%REC	1	3/22/2007
Surr: 2-Fluorobiphenyl	59.2	30.4-128	%REC	1	3/22/2007
Surr: 2-Fluorophenol	79.3	28.1-129	%REC	1	3/22/2007
Surr: 4-Terphenyl-d14	47.7	34.6-151	%REC	1	3/22/2007
Surr: Nitrobenzene-d5	67.5	26.5-122	%REC	1	3/22/2007
Surr: Phenol-d5	82.6	37.6-118	%REC	1	3/22/2007

EPA METHOD 8260B: VOLATILES					Analyst: SMP
Benzene	ND	0.050	mg/Kg	1	3/15/2007
Toluene	ND	0.050	mg/Kg	1	3/15/2007
Ethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	3/15/2007
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	3/15/2007
Naphthalene	ND	0.10	mg/Kg	1	3/15/2007
1-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
Acetone	ND	0.75	mg/Kg	1	3/15/2007
Bromobenzene	ND	0.050	mg/Kg	1	3/15/2007
Bromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromodichloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromoform	ND	0.050	mg/Kg	1	3/15/2007
Bromomethane	ND	0.10	mg/Kg	1	3/15/2007
2-Butanone	ND	0.50	mg/Kg	1	3/15/2007
Carbon disulfide	ND	0.50	mg/Kg	1	3/15/2007
Carbon tetrachloride	ND	0.10	mg/Kg	1	3/15/2007
Chlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Chloroethane	ND	0.10	mg/Kg	1	3/15/2007
Chloroform	ND	0.050	mg/Kg	1	3/15/2007
Chloromethane	ND	0.050	mg/Kg	1	3/15/2007
2-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

27 / 92

Page 26 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES					Analyst: SMP
cis-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	3/15/2007
Dibromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Dibromomethane	ND	0.10	mg/Kg	1	3/15/2007
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,1-Dichloroethane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloroethene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
2,2-Dichloropropane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloropropene	ND	0.10	mg/Kg	1	3/15/2007
Hexachlorobutadiene	ND	0.10	mg/Kg	1	3/15/2007
2-Hexanone	ND	0.50	mg/Kg	1	3/15/2007
Isopropylbenzene	ND	0.050	mg/Kg	1	3/15/2007
4-Isopropyltoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	3/15/2007
Methylene chloride	ND	0.15	mg/Kg	1	3/15/2007
n-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
n-Propylbenzene	ND	0.050	mg/Kg	1	3/15/2007
sec-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Styrene	ND	0.050	mg/Kg	1	3/15/2007
tert-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	3/15/2007
trans-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	3/15/2007
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	3/15/2007
Trichlorofluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	3/15/2007
Vinyl chloride	ND	0.050	mg/Kg	1	3/15/2007
Xylenes, Total	ND	0.10	mg/Kg	1	3/15/2007
Surr: 1,2-Dichloroethane-d4	89.1	62.1-102	%REC	1	3/15/2007
Surr: 4-Bromofluorobenzene	98.1	72-107	%REC	1	3/15/2007
Surr: Dibromofluoromethane	99.6	86.6-105	%REC	1	3/15/2007
Surr: Toluene-d8	102	83.4-104	%REC	1	3/15/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

28 / 92

Page 27 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2					Analyst: ADM
Oil & Grease, Total Recoverable	ND	20	mg/Kg	1	3/23/2007
EPA METHOD 418.1: TPH					Analyst: BL
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	3/23/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits 29 / 92
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 28 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-07 **Collection Date:** 3/10/2007 9:06:00 AM
Client Sample ID: S-3 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						**Analyst: SCC**
4,4'-DDD	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
4,4'-DDE	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
4,4'-DDT	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Aldrin	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
alpha-BHC	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
beta-BHC	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Chlordane	ND	25		mg/Kg	10	3/28/2007 6:23:33 AM
delta-BHC	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Dieldrin	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Endosulfan I	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Endosulfan II	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Endosulfan sulfate	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Endrin	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Endrin aldehyde	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
gamma-BHC	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Heptachlor	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Heptachlor epoxide	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Methoxychlor	ND	0.20		mg/Kg	10	3/28/2007 6:23:33 AM
Toxaphene	ND	25		mg/Kg	10	3/28/2007 6:23:33 AM
Surr: Decachlorobiphenyl	140	56.9-154		%REC	10	3/28/2007 6:23:33 AM
Surr: Tetrachloro-m-xylene	104	51.5-116		%REC	10	3/28/2007 6:23:33 AM
EPA METHOD 8082: PCB'S						**Analyst: JAT**
Aroclor 1016	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1221	ND	12		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1232	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1242	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1248	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1254	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Aroclor 1260	ND	1.0		mg/Kg	5	3/24/2007 12:26:26 AM
Surr: Decachlorobiphenyl	54.0	50.1-115		%REC	5	3/24/2007 12:26:26 AM
EPA METHOD 8310: PAHS						**Analyst: JMP**
Naphthalene	ND	25		mg/Kg	100	3/26/2007 10:06:20 PM
1-Methylnaphthalene	ND	25		mg/Kg	100	3/26/2007 10:06:20 PM
2-Methylnaphthalene	ND	25		mg/Kg	100	3/26/2007 10:06:20 PM
Acenaphthylene	ND	25		mg/Kg	100	3/26/2007 10:06:20 PM
Acenaphthene	ND	25		mg/Kg	100	3/26/2007 10:06:20 PM
Fluorene	ND	3.0		mg/Kg	100	3/26/2007 10:06:20 PM
Phenanthrene	ND	1.5		mg/Kg	100	3/26/2007 10:06:20 PM

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

30/92

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 29 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8310: PAHS						Analyst: JMP
Anthracene	ND	1.6		mg/Kg	100	3/26/2007 10:06:20 PM
Fluoranthene	ND	2.0		mg/Kg	100	3/26/2007 10:06:20 PM
Pyrene	ND	2.5		mg/Kg	100	3/26/2007 10:06:20 PM
Benz(a)anthracene	ND	0.20		mg/Kg	100	3/26/2007 10:06:20 PM
Chrysene	ND	1.1		mg/Kg	100	3/26/2007 10:06:20 PM
Benzo(b)fluoranthene	ND	0.40		mg/Kg	100	3/26/2007 10:06:20 PM
Benzo(k)fluoranthene	ND	0.10		mg/Kg	100	3/26/2007 10:06:20 PM
Benzo(a)pyrene	ND	0.10		mg/Kg	100	3/26/2007 10:06:20 PM
Dibenz(a,h)anthracene	ND	0.30		mg/Kg	100	3/26/2007 10:06:20 PM
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	100	3/26/2007 10:06:20 PM
Indeno(1,2,3-cd)pyrene	ND	0.40		mg/Kg	100	3/26/2007 10:06:20 PM
Surr: Benzo(e)pyrene	240	52.8-123	S	%REC	100	3/26/2007 10:06:20 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	28	1.5		mg/Kg	5	3/23/2007 4:51:30 AM
EPA METHOD 7471: MERCURY						Analyst: MAP
Mercury	0.28	0.033		mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS						Analyst: NMO
Arsenic	20	2.5		mg/Kg	1	3/27/2007 9:23:15 AM
Barium	910	2.0		mg/Kg	20	3/27/2007 10:48:58 AM
Cadmium	ND	0.10		mg/Kg	1	3/27/2007 9:23:15 AM
Chromium	23	0.30		mg/Kg	1	3/27/2007 9:23:15 AM
Lead	48	0.25		mg/Kg	1	3/27/2007 9:23:15 AM
Selenium	ND	2.5		mg/Kg	1	3/27/2007 9:23:15 AM
Silver	ND	0.25		mg/Kg	1	3/27/2007 9:23:15 AM
Thallium	ND	2.5		mg/Kg	1	3/27/2007 9:23:15 AM
Uranium	ND	5.0		mg/Kg	1	3/27/2007 9:23:15 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	40		mg/Kg	20	3/22/2007
Acenaphthylene	ND	40		mg/Kg	20	3/22/2007
Aniline	ND	40		mg/Kg	20	3/22/2007
Anthracene	ND	40		mg/Kg	20	3/22/2007
Azobenzene	ND	40		mg/Kg	20	3/22/2007
Benz(a)anthracene	ND	50		mg/Kg	20	3/22/2007
Benzo(a)pyrene	ND	40		mg/Kg	20	3/22/2007
Benzo(b)fluoranthene	ND	40		mg/Kg	20	3/22/2007
Benzo(g,h,i)perylene	ND	60		mg/Kg	20	3/22/2007
Benzo(k)fluoranthene	ND	100		mg/Kg	20	3/22/2007
Benzoic acid	ND	100		mg/Kg	20	3/22/2007
Benzyl alcohol	ND	200		mg/Kg	20	3/22/2007
Bis(2-chloroethoxy)methane	ND	100		mg/Kg	20	3/22/2007
Bis(2-chloroethyl)ether	ND	50		mg/Kg	20	3/22/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits 31/92
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 30 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES Analyst: BL

Bis(2-chloroisopropyl)ether	ND	100	mg/Kg	20	3/22/2007
Bis(2-ethylhexyl)phthalate	ND	40	mg/Kg	20	3/22/2007
4-Bromophenyl phenyl ether	ND	50	mg/Kg	20	3/22/2007
Butyl benzyl phthalate	ND	40	mg/Kg	20	3/22/2007
Carbazole	ND	40	mg/Kg	20	3/22/2007
4-Chloro-3-methylphenol	ND	40	mg/Kg	20	3/22/2007
4-Chloroaniline	ND	40	mg/Kg	20	3/22/2007
2-Chloronaphthalene	ND	40	mg/Kg	20	3/22/2007
2-Chlorophenol	ND	40	mg/Kg	20	3/22/2007
4-Chlorophenyl phenyl ether	ND	40	mg/Kg	20	3/22/2007
Chrysene	ND	40	mg/Kg	20	3/22/2007
Di-n-butyl phthalate	ND	100	mg/Kg	20	3/22/2007
Di-n-octyl phthalate	ND	100	mg/Kg	20	3/22/2007
Dibenz(a,h)anthracene	ND	50	mg/Kg	20	3/22/2007
Dibenzofuran	ND	100	mg/Kg	20	3/22/2007
1,2-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
1,3-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
1,4-Dichlorobenzene	ND	40	mg/Kg	20	3/22/2007
3,3'-Dichlorobenzidine	ND	40	mg/Kg	20	3/22/2007
Diethyl phthalate	ND	40	mg/Kg	20	3/22/2007
Dimethyl phthalate	ND	40	mg/Kg	20	3/22/2007
2,4-Dichlorophenol	ND	40	mg/Kg	20	3/22/2007
2,4-Dimethylphenol	ND	40	mg/Kg	20	3/22/2007
4,6-Dinitro-2-methylphenol	ND	100	mg/Kg	20	3/22/2007
2,4-Dinitrophenol	ND	100	mg/Kg	20	3/22/2007
2,4-Dinitrotoluene	ND	40	mg/Kg	20	3/22/2007
2,6-Dinitrotoluene	ND	40	mg/Kg	20	3/22/2007
Fluoranthene	ND	40	mg/Kg	20	3/22/2007
Fluorene	ND	40	mg/Kg	20	3/22/2007
Hexachlorobenzene	ND	40	mg/Kg	20	3/22/2007
Hexachlorobutadiene	ND	40	mg/Kg	20	3/22/2007
Hexachlorocyclopentadiene	ND	50	mg/Kg	20	3/22/2007
Hexachloroethane	ND	100	mg/Kg	20	3/22/2007
Indeno(1,2,3-cd)pyrene	ND	40	mg/Kg	20	3/22/2007
Isophorone	ND	40	mg/Kg	20	3/22/2007
2-Methylnaphthalene	ND	40	mg/Kg	20	3/22/2007
2-Methylphenol	ND	40	mg/Kg	20	3/22/2007
3+4-Methylphenol	ND	40	mg/Kg	20	3/22/2007
N-Nitrosodi-n-propylamine	ND	40	mg/Kg	20	3/22/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	20	3/22/2007
N-Nitrosodiphenylamine	ND	40	mg/Kg	20	3/22/2007
Naphthalene	ND	40	mg/Kg	20	3/22/2007
2-Nitroaniline	ND	100	mg/Kg	20	3/22/2007
3-Nitroaniline	ND	100	mg/Kg	20	3/22/2007
4-Nitroaniline	ND	50	mg/Kg	20	3/22/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

32/92

Page 31 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Nitrobenzene	ND	40		mg/Kg	20	3/22/2007
2-Nitrophenol	ND	40		mg/Kg	20	3/22/2007
4-Nitrophenol	ND	40		mg/Kg	20	3/22/2007
Pentachlorophenol	ND	100		mg/Kg	20	3/22/2007
Phenanthrene	ND	40		mg/Kg	20	3/22/2007
Phenol	ND	40		mg/Kg	20	3/22/2007
Pyrene	ND	40		mg/Kg	20	3/22/2007
Pyridine	ND	100		mg/Kg	20	3/22/2007
1,2,4-Trichlorobenzene	ND	40		mg/Kg	20	3/22/2007
2,4,5-Trichlorophenol	ND	40		mg/Kg	20	3/22/2007
2,4,6-Trichlorophenol	ND	40		mg/Kg	20	3/22/2007
Surr: 2,4,6-Tribromophenol	398	35.5-141	S	%REC	20	3/22/2007
Surr: 2-Fluorobiphenyl	0	30.4-128	S	%REC	20	3/22/2007
Surr: 2-Fluorophenol	274	28.1-129	S	%REC	20	3/22/2007
Surr: 4-Terphenyl-d14	0	34.6-151	S	%REC	20	3/22/2007
Surr: Nitrobenzene-d5	0	26.5-122	S	%REC	20	3/22/2007
Surr: Phenol-d5	0	37.6-118	S	%REC	20	3/22/2007

EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	ND	0.050		mg/Kg	1	3/19/2007
Toluene	ND	0.050		mg/Kg	1	3/19/2007
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2007
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	3/19/2007
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	3/19/2007
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	3/19/2007
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	3/19/2007
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	3/19/2007
Naphthalene	ND	0.10		mg/Kg	1	3/19/2007
1-Methylnaphthalene	ND	0.20		mg/Kg	1	3/19/2007
2-Methylnaphthalene	ND	0.20		mg/Kg	1	3/19/2007
Acetone	ND	0.75		mg/Kg	1	3/19/2007
Bromobenzene	ND	0.050		mg/Kg	1	3/19/2007
Bromochloromethane	ND	0.050		mg/Kg	1	3/19/2007
Bromodichloromethane	ND	0.050		mg/Kg	1	3/19/2007
Bromoform	ND	0.050		mg/Kg	1	3/19/2007
Bromomethane	ND	0.10		mg/Kg	1	3/19/2007
2-Butanone	ND	0.50		mg/Kg	1	3/19/2007
Carbon disulfide	ND	0.50		mg/Kg	1	3/19/2007
Carbon tetrachloride	ND	0.10		mg/Kg	1	3/19/2007
Chlorobenzene	ND	0.050		mg/Kg	1	3/19/2007
Chloroethane	ND	0.10		mg/Kg	1	3/19/2007
Chloroform	ND	0.050		mg/Kg	1	3/19/2007
Chloromethane	ND	0.050		mg/Kg	1	3/19/2007
2-Chlorotoluene	ND	0.050		mg/Kg	1	3/19/2007
4-Chlorotoluene	ND	0.050		mg/Kg	1	3/19/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

33 / 92

Page 32 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES						Analyst: SMP
cis-1,2-DCE	ND	0.050		mg/Kg	1	3/19/2007
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	3/19/2007
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	3/19/2007
Dibromochloromethane	ND	0.050		mg/Kg	1	3/19/2007
Dibromomethane	ND	0.10		mg/Kg	1	3/19/2007
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	3/19/2007
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	3/19/2007
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	3/19/2007
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	3/19/2007
1,1-Dichloroethane	ND	0.10		mg/Kg	1	3/19/2007
1,1-Dichloroethene	ND	0.050		mg/Kg	1	3/19/2007
1,2-Dichloropropane	ND	0.050		mg/Kg	1	3/19/2007
1,3-Dichloropropane	ND	0.050		mg/Kg	1	3/19/2007
2,2-Dichloropropane	ND	0.10		mg/Kg	1	3/19/2007
1,1-Dichloropropene	ND	0.10		mg/Kg	1	3/19/2007
Hexachlorobutadiene	ND	0.10		mg/Kg	1	3/19/2007
2-Hexanone	ND	0.50		mg/Kg	1	3/19/2007
Isopropylbenzene	ND	0.050		mg/Kg	1	3/19/2007
4-Isopropyltoluene	ND	0.050		mg/Kg	1	3/19/2007
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	3/19/2007
Methylene chloride	ND	0.15		mg/Kg	1	3/19/2007
n-Butylbenzene	ND	0.050		mg/Kg	1	3/19/2007
n-Propylbenzene	ND	0.050		mg/Kg	1	3/19/2007
sec-Butylbenzene	ND	0.050		mg/Kg	1	3/19/2007
Styrene	ND	0.050		mg/Kg	1	3/19/2007
tert-Butylbenzene	ND	0.050		mg/Kg	1	3/19/2007
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	3/19/2007
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	3/19/2007
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	3/19/2007
trans-1,2-DCE	ND	0.050		mg/Kg	1	3/19/2007
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	3/19/2007
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	3/19/2007
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	3/19/2007
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	3/19/2007
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	3/19/2007
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	3/19/2007
Trichlorofluoromethane	ND	0.050		mg/Kg	1	3/19/2007
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	3/19/2007
Vinyl chloride	ND	0.050		mg/Kg	1	3/19/2007
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2007
Surr: 1,2-Dichloroethane-d4	93.4	62.1-102		%REC	1	3/19/2007
Surr: 4-Bromofluorobenzene	106	72-107		%REC	1	3/19/2007
Surr: Dibromofluoromethane	90.8	56.6-105		%REC	1	3/19/2007
Surr: Toluene-d8	108	83.4-104	S	%REC	1	3/19/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

34 / 92

Page 33 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2					**Analyst: ADM**
Oil & Grease, Total Recoverable	59000	4000	mg/Kg	200	3/23/2007
EPA METHOD 418.1: TPH					**Analyst: BL**
Petroleum Hydrocarbons, TR	59000	4000	mg/Kg	200	3/23/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits	35 / 92	

Page 34 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-08 **Collection Date:** 3/10/2007 9:26:00 AM
Client Sample ID: S-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						Analyst: SCC
4,4'-DDD	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
4,4'-DDE	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
4,4'-DDT	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Aldrin	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
alpha-BHC	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
beta-BHC	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Chlordane	ND	0.25		mg/Kg	1	3/27/2007 10:35:04 PM
delta-BHC	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Dieldrin	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Endosulfan I	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Endosulfan II	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Endosulfan sulfate	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Endrin	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Endrin aldehyde	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
gamma-BHC	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Heptachlor	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Heptachlor epoxide	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Methoxychlor	ND	0.0020		mg/Kg	1	3/27/2007 10:35:04 PM
Toxaphene	ND	0.25		mg/Kg	1	3/27/2007 10:35:04 PM
Surr: Decachlorobiphenyl	99.6	56.9-154		%REC	1	3/27/2007 10:35:04 PM
Surr: Tetrachloro-m-xylene	63.2	51.5-118		%REC	1	3/27/2007 10:35:04 PM
EPA METHOD 8082: PCB'S						Analyst: JAT
Aroclor 1016	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1221	ND	0.25		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1232	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1242	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1248	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1254	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Aroclor 1260	ND	0.020		mg/Kg	1	3/15/2007 10:18:36 AM
Surr: Decachlorobiphenyl	73.6	50.1-115		%REC	1	3/15/2007 10:18:36 AM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	ND	0.25		mg/Kg	1	3/26/2007 6:54:21 PM
1-Methylnaphthalene	ND	0.25		mg/Kg	1	3/26/2007 6:54:21 PM
2-Methylnaphthalene	ND	0.25		mg/Kg	1	3/26/2007 6:54:21 PM
Acenaphthylene	ND	0.25		mg/Kg	1	3/26/2007 6:54:21 PM
Acenaphthene	ND	0.25		mg/Kg	1	3/26/2007 6:54:21 PM
Fluorene	ND	0.030		mg/Kg	1	3/26/2007 6:54:21 PM
Phenanthrene	ND	0.015		mg/Kg	1	3/26/2007 6:54:21 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

36 / 92

Page 35 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8310: PAHS					Analyst: JMP
Anthracene	ND	0.015	mg/Kg	1	3/26/2007 6:54:21 PM
Fluoranthene	ND	0.020	mg/Kg	1	3/26/2007 6:54:21 PM
Pyrene	ND	0.025	mg/Kg	1	3/26/2007 6:54:21 PM
Benz(a)anthracene	ND	0.0020	mg/Kg	1	3/26/2007 6:54:21 PM
Chrysene	ND	0.011	mg/Kg	1	3/26/2007 6:54:21 PM
Benzo(b)fluoranthene	ND	0.0040	mg/Kg	1	3/26/2007 6:54:21 PM
Benzo(k)fluoranthene	ND	0.0010	mg/Kg	1	3/26/2007 6:54:21 PM
Benzo(a)pyrene	ND	0.0010	mg/Kg	1	3/26/2007 6:54:21 PM
Dibenz(a,h)anthracene	ND	0.0030	mg/Kg	1	3/26/2007 6:54:21 PM
Benzo(g,h,i)perylene	ND	0.0030	mg/Kg	1	3/26/2007 6:54:21 PM
Indeno(1,2,3-cd)pyrene	ND	0.0040	mg/Kg	1	3/26/2007 6:54:21 PM
Surr: Benzo(e)pyrene	92.6	52.8-123	%REC	1	3/26/2007 6:54:21 PM
EPA METHOD 9056A: ANIONS					Analyst: TES
Chloride	97	1.5	mg/Kg	5	3/23/2007 5:08:54 AM
EPA METHOD 7471: MERCURY					Analyst: MAP
Mercury	ND	0.033	mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS					Analyst: NMO
Arsenic	14	2.5	mg/Kg	1	3/27/2007 9:27:00 AM
Barium	17	0.10	mg/Kg	1	3/27/2007 9:27:00 AM
Cadmium	ND	0.10	mg/Kg	1	3/27/2007 9:27:00 AM
Chromium	14	0.30	mg/Kg	1	3/27/2007 9:27:00 AM
Lead	6.0	0.25	mg/Kg	1	3/27/2007 9:27:00 AM
Selenium	ND	2.5	mg/Kg	1	3/27/2007 9:27:00 AM
Silver	ND	0.25	mg/Kg	1	3/27/2007 9:27:00 AM
Thallium	ND	2.5	mg/Kg	1	3/27/2007 9:27:00 AM
Uranium	ND	5.0	mg/Kg	1	3/27/2007 9:27:00 AM
EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Acenaphthene	ND	0.20	mg/Kg	1	3/22/2007
Acenaphthylene	ND	0.20	mg/Kg	1	3/22/2007
Aniline	ND	0.20	mg/Kg	1	3/22/2007
Anthracene	ND	0.20	mg/Kg	1	3/22/2007
Azobenzene	ND	0.20	mg/Kg	1	3/22/2007
Benz(a)anthracene	ND	0.25	mg/Kg	1	3/22/2007
Benzo(a)pyrene	ND	0.20	mg/Kg	1	3/22/2007
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	3/22/2007
Benzo(g,h,i)perylene	ND	0.30	mg/Kg	1	3/22/2007
Benzo(k)fluoranthene	ND	0.50	mg/Kg	1	3/22/2007
Benzoic acid	ND	0.50	mg/Kg	1	3/22/2007
Benzyl alcohol	ND	1.0	mg/Kg	1	3/22/2007
Bis(2-chloroethoxy)methane	ND	0.50	mg/Kg	1	3/22/2007
Bis(2-chloroethyl)ether	ND	0.25	mg/Kg	1	3/22/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

37 / 92

Page 36 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES **Analyst: BL**

Bis(2-chloroisopropyl)ether	ND	0.50	mg/Kg	1	3/22/2007
Bis(2-ethylhexyl)phthalate	ND	0.20	mg/Kg	1	3/22/2007
4-Bromophenyl phenyl ether	ND	0.25	mg/Kg	1	3/22/2007
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
Carbazole	ND	0.20	mg/Kg	1	3/22/2007
4-Chloro-3-methylphenol	ND	0.20	mg/Kg	1	3/22/2007
4-Chloroaniline	ND	0.20	mg/Kg	1	3/22/2007
2-Chloronaphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Chlorophenol	ND	0.20	mg/Kg	1	3/22/2007
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	3/22/2007
Chrysene	ND	0.20	mg/Kg	1	3/22/2007
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	3/22/2007
Di-n-octyl phthalate	ND	0.50	mg/Kg	1	3/22/2007
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	3/22/2007
Dibenzofuran	ND	0.50	mg/Kg	1	3/22/2007
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
3,3'-Dichlorobenzidine	ND	0.20	mg/Kg	1	3/22/2007
Diethyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
Dimethyl phthalate	ND	0.20	mg/Kg	1	3/22/2007
2,4-Dichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
2,4-Dimethylphenol	ND	0.20	mg/Kg	1	3/22/2007
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	3/22/2007
2,4-Dinitrophenol	ND	0.50	mg/Kg	1	3/22/2007
2,4-Dinitrotoluene	ND	0.20	mg/Kg	1	3/22/2007
2,6-Dinitrotoluene	ND	0.20	mg/Kg	1	3/22/2007
Fluoranthene	ND	0.20	mg/Kg	1	3/22/2007
Fluorene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorobutadiene	ND	0.20	mg/Kg	1	3/22/2007
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	3/22/2007
Hexachloroethane	ND	0.50	mg/Kg	1	3/22/2007
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg	1	3/22/2007
Isophorone	ND	0.20	mg/Kg	1	3/22/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Methylphenol	ND	0.20	mg/Kg	1	3/22/2007
3+4-Methylphenol	ND	0.20	mg/Kg	1	3/22/2007
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	3/22/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	1	3/22/2007
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	3/22/2007
Naphthalene	ND	0.20	mg/Kg	1	3/22/2007
2-Nitroaniline	ND	0.50	mg/Kg	1	3/22/2007
3-Nitroaniline	ND	0.50	mg/Kg	1	3/22/2007
4-Nitroaniline	ND	0.25	mg/Kg	1	3/22/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

38 / 92

Page 37 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Nitrobenzene	ND	0.20	mg/Kg	1	3/22/2007
2-Nitrophenol	ND	0.20	mg/Kg	1	3/22/2007
4-Nitrophenol	ND	0.20	mg/Kg	1	3/22/2007
Pentachlorophenol	ND	0.50	mg/Kg	1	3/22/2007
Phenanthrene	ND	0.20	mg/Kg	1	3/22/2007
Phenol	ND	0.20	mg/Kg	1	3/22/2007
Pyrene	ND	0.20	mg/Kg	1	3/22/2007
Pyridine	ND	0.50	mg/Kg	1	3/22/2007
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	3/22/2007
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	3/22/2007
Surr: 2,4,6-Tribromophenol	78.1	35.5-141	%REC	1	3/22/2007
Surr: 2-Fluorobiphenyl	73.2	30.4-126	%REC	1	3/22/2007
Surr: 2-Fluorophenol	76.0	28.1-129	%REC	1	3/22/2007
Surr: 4-Terphenyl-d14	88.2	34.6-151	%REC	1	3/22/2007
Surr: Nitrobenzene-d5	64.3	26.5-122	%REC	1	3/22/2007
Surr: Phenol-d5	75.8	37.6-118	%REC	1	3/22/2007

EPA METHOD 8260B: VOLATILES					Analyst: SMP
Benzene	ND	0.050	mg/Kg	1	3/15/2007
Toluene	ND	0.050	mg/Kg	1	3/15/2007
Ethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	3/15/2007
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	3/15/2007
Naphthalene	ND	0.10	mg/Kg	1	3/15/2007
1-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
Acetone	ND	0.75	mg/Kg	1	3/15/2007
Bromobenzene	ND	0.050	mg/Kg	1	3/15/2007
Bromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromodichloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromoform	ND	0.050	mg/Kg	1	3/15/2007
Bromomethane	ND	0.10	mg/Kg	1	3/15/2007
2-Butanone	ND	0.50	mg/Kg	1	3/15/2007
Carbon disulfide	ND	0.50	mg/Kg	1	3/15/2007
Carbon tetrachloride	ND	0.10	mg/Kg	1	3/15/2007
Chlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Chloroethane	ND	0.10	mg/Kg	1	3/15/2007
Chloroform	ND	0.050	mg/Kg	1	3/15/2007
Chloromethane	ND	0.050	mg/Kg	1	3/15/2007
2-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

39 / 92

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES Analyst: SMP

cis-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	3/15/2007
Dibromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Dibromomethane	ND	0.10	mg/Kg	1	3/15/2007
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,1-Dichloroethane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloroethene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
2,2-Dichloropropane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloropropene	ND	0.10	mg/Kg	1	3/15/2007
Hexachlorobutadiene	ND	0.10	mg/Kg	1	3/15/2007
2-Hexanone	ND	0.50	mg/Kg	1	3/15/2007
Isopropylbenzene	ND	0.050	mg/Kg	1	3/15/2007
4-Isopropyltoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	3/15/2007
Methylene chloride	ND	0.15	mg/Kg	1	3/15/2007
n-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
n-Propylbenzene	ND	0.050	mg/Kg	1	3/15/2007
sec-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Styrene	ND	0.050	mg/Kg	1	3/15/2007
tert-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	3/15/2007
trans-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	3/15/2007
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	3/15/2007
Trichlorofluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	3/15/2007
Vinyl chloride	ND	0.050	mg/Kg	1	3/15/2007
Xylenes, Total	ND	0.10	mg/Kg	1	3/15/2007
Surr: 1,2-Dichloroethane-d4	91.4	62.1-102	%REC	1	3/15/2007
Surr: 4-Bromofluorobenzene	94.3	72-107	%REC	1	3/15/2007
Surr: Dibromofluoromethane	100	56.6-105	%REC	1	3/15/2007
Surr: Toluene-d8	104	83.4-104	%REC	1	3/15/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

40 / 92

Page 39 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2					Analyst: ADM
Oil & Grease, Total Recoverable	ND	20	mg/Kg	1	3/23/2007
EPA METHOD 418.1: TPH					Analyst: BL
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	3/23/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limit: 41/92		

Page 40 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-09 **Collection Date:** 3/10/2007 10:15:00 AM
Client Sample ID: S-5 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						Analyst: SCC
4,4'-DDD	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
4,4'-DDE	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
4,4'-DDT	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Aldrin	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
alpha-BHC	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
beta-BHC	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Chlordane	ND	25		mg/Kg	10	3/28/2007 8:11:15 AM
delta-BHC	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Dieldrin	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Endosulfan I	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Endosulfan II	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Endosulfan sulfate	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Endrin	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Endrin aldehyde	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
gamma-BHC	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Heptachlor	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Heptachlor epoxide	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Methoxychlor	ND	0.20		mg/Kg	10	3/28/2007 8:11:15 AM
Toxaphene	ND	25		mg/Kg	10	3/28/2007 8:11:15 AM
Surr: Decachlorobiphenyl	152	56.9-154		%REC	10	3/28/2007 8:11:15 AM
Surr: Tetrachloro-m-xylene	120	51.5-116	S	%REC	10	3/28/2007 8:11:15 AM
EPA METHOD 8082: PCB'S						Analyst: JAT
Aroclor 1016	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1221	ND	12		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1232	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1242	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1248	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1254	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Aroclor 1260	ND	1.0		mg/Kg	5	3/24/2007 1:56:06 AM
Surr: Decachlorobiphenyl	76.0	50.1-115		%REC	5	3/24/2007 1:56:06 AM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	ND	17		mg/Kg	50	3/26/2007 10:54:18 PM
1-Methylnaphthalene	ND	17		mg/Kg	50	3/26/2007 10:54:18 PM
2-Methylnaphthalene	ND	17		mg/Kg	50	3/26/2007 10:54:18 PM
Acenaphthylene	ND	17		mg/Kg	50	3/26/2007 10:54:18 PM
Acenaphthene	ND	17		mg/Kg	50	3/26/2007 10:54:18 PM
Fluorene	ND	2.0		mg/Kg	50	3/26/2007 10:54:18 PM
Phenanthrene	ND	1.0		mg/Kg	50	3/26/2007 10:54:18 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

42 / 92

Page 41 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: 10-Apr-07

CLIENT: Gordon Environmental, Inc.
Project: GNEP
Lab Order: 0703134

Analyte	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8310: PAHS						Analyst: JMP
Anthracene	ND	1.0		mg/Kg	50	3/26/2007 10:54:18 PM
Fluoranthene	ND	1.3		mg/Kg	50	3/26/2007 10:54:18 PM
Pyrene	ND	1.7		mg/Kg	50	3/26/2007 10:54:18 PM
Benz(a)anthracene	ND	0.13		mg/Kg	50	3/26/2007 10:54:18 PM
Chrysene	ND	0.73		mg/Kg	50	3/26/2007 10:54:18 PM
Benzo(b)fluoranthene	ND	0.27		mg/Kg	50	3/26/2007 10:54:18 PM
Benzo(k)fluoranthene	ND	0.067		mg/Kg	50	3/26/2007 10:54:18 PM
Benzo(a)pyrene	ND	0.067		mg/Kg	50	3/26/2007 10:54:18 PM
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	50	3/26/2007 10:54:18 PM
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	50	3/26/2007 10:54:18 PM
Indeno(1,2,3-cd)pyrene	ND	0.27		mg/Kg	50	3/26/2007 10:54:18 PM
Surr: Benzo(e)pyrene	210	52.8-123	S	%REC	50	3/26/2007 10:54:18 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	780	3.0		mg/Kg	10	3/23/2007 5:26:19 AM
EPA METHOD 7471: MERCURY						Analyst: MAP
Mercury	0.26	0.033		mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS						Analyst: NMO
Arsenic	21	2.5		mg/Kg	1	3/27/2007 10:32:45 AM
Barium	830	2.0		mg/Kg	20	3/27/2007 11:22:10 AM
Cadmium	ND	0.10		mg/Kg	1	3/27/2007 10:32:45 AM
Chromium	38	0.30		mg/Kg	1	3/27/2007 10:32:45 AM
Lead	650	5.0		mg/Kg	20	3/27/2007 11:22:10 AM
Selenium	ND	2.5		mg/Kg	1	3/27/2007 10:32:45 AM
Silver	ND	0.25		mg/Kg	1	3/27/2007 10:32:45 AM
Thallium	ND	2.5		mg/Kg	1	3/27/2007 10:32:45 AM
Uranium	ND	5.0		mg/Kg	1	3/27/2007 10:32:45 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	40		mg/Kg	20	3/26/2007
Acenaphthylene	ND	40		mg/Kg	20	3/26/2007
Aniline	ND	40		mg/Kg	20	3/26/2007
Anthracene	ND	40		mg/Kg	20	3/26/2007
Azobenzene	ND	40		mg/Kg	20	3/26/2007
Benz(a)anthracene	ND	50		mg/Kg	20	3/26/2007
Benzo(a)pyrene	ND	40		mg/Kg	20	3/26/2007
Benzo(b)fluoranthene	ND	40		mg/Kg	20	3/26/2007
Benzo(g,h,i)perylene	ND	60		mg/Kg	20	3/26/2007
Benzo(k)fluoranthene	ND	100		mg/Kg	20	3/26/2007
Benzoic acid	ND	100		mg/Kg	20	3/26/2007
Benzyl alcohol	ND	200		mg/Kg	20	3/26/2007
Bis(2-chloroethoxy)methane	ND	100		mg/Kg	20	3/26/2007
Bis(2-chloroethyl)ether	ND	50		mg/Kg	20	3/26/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

43/92

Page 42 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES Analyst: BL

Bis(2-chloroisopropyl)ether	ND	100	mg/Kg	20	3/26/2007
Bis(2-ethylhexyl)phthalate	ND	40	mg/Kg	20	3/26/2007
4-Bromophenyl phenyl ether	ND	50	mg/Kg	20	3/26/2007
Butyl benzyl phthalate	ND	40	mg/Kg	20	3/26/2007
Carbazole	ND	40	mg/Kg	20	3/26/2007
4-Chloro-3-methylphenol	ND	40	mg/Kg	20	3/26/2007
4-Chloroaniline	ND	40	mg/Kg	20	3/26/2007
2-Chloronaphthalene	ND	40	mg/Kg	20	3/26/2007
2-Chlorophenol	ND	40	mg/Kg	20	3/26/2007
4-Chlorophenyl phenyl ether	ND	40	mg/Kg	20	3/26/2007
Chrysene	ND	40	mg/Kg	20	3/26/2007
Di-n-butyl phthalate	ND	100	mg/Kg	20	3/26/2007
Di-n-octyl phthalate	ND	100	mg/Kg	20	3/26/2007
Dibenz(a,h)anthracene	ND	50	mg/Kg	20	3/26/2007
Dibenzofuran	ND	100	mg/Kg	20	3/26/2007
1,2-Dichlorobenzene	ND	40	mg/Kg	20	3/26/2007
1,3-Dichlorobenzene	ND	40	mg/Kg	20	3/26/2007
1,4-Dichlorobenzene	ND	40	mg/Kg	20	3/26/2007
3,3'-Dichlorobenzidine	ND	40	mg/Kg	20	3/26/2007
Diethyl phthalate	ND	40	mg/Kg	20	3/26/2007
Dimethyl phthalate	ND	40	mg/Kg	20	3/26/2007
2,4-Dichlorophenol	ND	40	mg/Kg	20	3/26/2007
2,4-Dimethylphenol	ND	40	mg/Kg	20	3/26/2007
4,6-Dinitro-2-methylphenol	ND	100	mg/Kg	20	3/26/2007
2,4-Dinitrophenol	ND	100	mg/Kg	20	3/26/2007
2,4-Dinitrotoluene	ND	40	mg/Kg	20	3/26/2007
2,6-Dinitrotoluene	ND	40	mg/Kg	20	3/26/2007
Fluoranthene	ND	40	mg/Kg	20	3/26/2007
Fluorene	ND	40	mg/Kg	20	3/26/2007
Hexachlorobenzene	ND	40	mg/Kg	20	3/26/2007
Hexachlorobutadiene	ND	40	mg/Kg	20	3/26/2007
Hexachlorocyclopentadiene	ND	50	mg/Kg	20	3/26/2007
Hexachloroethane	ND	100	mg/Kg	20	3/26/2007
Indeno(1,2,3-cd)pyrene	ND	40	mg/Kg	20	3/26/2007
Isophorone	ND	40	mg/Kg	20	3/26/2007
2-Methylnaphthalene	ND	40	mg/Kg	20	3/26/2007
2-Methylphenol	ND	40	mg/Kg	20	3/26/2007
3+4-Methylphenol	ND	40	mg/Kg	20	3/26/2007
N-Nitrosodi-n-propylamine	ND	40	mg/Kg	20	3/26/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	20	3/26/2007
N-Nitrosodiphenylamine	ND	40	mg/Kg	20	3/26/2007
Naphthalene	ND	40	mg/Kg	20	3/26/2007
2-Nitroaniline	ND	100	mg/Kg	20	3/26/2007
3-Nitroaniline	ND	100	mg/Kg	20	3/26/2007
4-Nitroaniline	ND	50	mg/Kg	20	3/26/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

44 / 92

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 43 of 54

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Nitrobenzene	ND	40		mg/Kg	20	3/26/2007
2-Nitrophenol	ND	40		mg/Kg	20	3/26/2007
4-Nitrophenol	ND	40		mg/Kg	20	3/26/2007
Pentachlorophenol	ND	100		mg/Kg	20	3/26/2007
Phenanthrene	ND	40		mg/Kg	20	3/26/2007
Phenol	ND	40		mg/Kg	20	3/26/2007
Pyrene	ND	40		mg/Kg	20	3/26/2007
Pyridine	ND	100		mg/Kg	20	3/26/2007
1,2,4-Trichlorobenzene	ND	40		mg/Kg	20	3/26/2007
2,4,5-Trichlorophenol	ND	40		mg/Kg	20	3/26/2007
2,4,6-Trichlorophenol	ND	40		mg/Kg	20	3/26/2007
Surr: 2,4,6-Tribromophenol	388	35.5-141	S	%REC	20	3/26/2007
Surr: 2-Fluorobiphenyl	0	30.4-128	S	%REC	20	3/26/2007
Surr: 2-Fluorophenol	262	28.1-129	S	%REC	20	3/26/2007
Surr: 4-Terphenyl-d14	0	34.6-151	S	%REC	20	3/26/2007
Surr: Nitrobenzene-d5	0	26.5-122	S	%REC	20	3/26/2007
Surr: Phenol-d5	0	37.6-118	S	%REC	20	3/26/2007

EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	ND	0.050		mg/Kg	1	3/15/2007
Toluene	ND	0.050		mg/Kg	1	3/15/2007
Ethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	3/15/2007
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	3/15/2007
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	3/15/2007
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	3/15/2007
Naphthalene	ND	0.10		mg/Kg	1	3/15/2007
1-Methylnaphthalene	ND	0.20		mg/Kg	1	3/15/2007
2-Methylnaphthalene	ND	0.20		mg/Kg	1	3/15/2007
Acetone	ND	0.75		mg/Kg	1	3/15/2007
Bromobenzene	ND	0.050		mg/Kg	1	3/15/2007
Bromochloromethane	ND	0.050		mg/Kg	1	3/15/2007
Bromodichloromethane	ND	0.050		mg/Kg	1	3/15/2007
Bromoform	ND	0.050		mg/Kg	1	3/15/2007
Bromomethane	ND	0.10		mg/Kg	1	3/15/2007
2-Butanone	ND	0.50		mg/Kg	1	3/15/2007
Carbon disulfide	ND	0.50		mg/Kg	1	3/15/2007
Carbon tetrachloride	ND	0.10		mg/Kg	1	3/15/2007
Chlorobenzene	ND	0.050		mg/Kg	1	3/15/2007
Chloroethane	ND	0.10		mg/Kg	1	3/15/2007
Chloroform	ND	0.050		mg/Kg	1	3/15/2007
Chloromethane	ND	0.050		mg/Kg	1	3/15/2007
2-Chlorotoluene	ND	0.050		mg/Kg	1	3/15/2007
4-Chlorotoluene	ND	0.050		mg/Kg	1	3/15/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

45 / 92

Page 44 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES **Analyst: SMP**

cis-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	3/15/2007
Dibromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Dibromomethane	ND	0.10	mg/Kg	1	3/15/2007
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,1-Dichloroethane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloroethene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
2,2-Dichloropropane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloropropene	ND	0.10	mg/Kg	1	3/15/2007
Hexachlorobutadiene	ND	0.10	mg/Kg	1	3/15/2007
2-Hexanone	ND	0.50	mg/Kg	1	3/15/2007
Isopropylbenzene	ND	0.050	mg/Kg	1	3/15/2007
4-Isopropyltoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	3/15/2007
Methylene chloride	ND	0.15	mg/Kg	1	3/15/2007
n-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
n-Propylbenzene	ND	0.050	mg/Kg	1	3/15/2007
sec-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Styrene	ND	0.050	mg/Kg	1	3/15/2007
tert-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	3/15/2007
trans-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	3/15/2007
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	3/15/2007
Trichlorofluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	3/15/2007
Vinyl chloride	ND	0.050	mg/Kg	1	3/15/2007
Xylenes, Total	ND	0.10	mg/Kg	1	3/15/2007
Surr: 1,2-Dichloroethane-d4	88.6	62.1-102	%REC	1	3/15/2007
Surr: 4-Bromofluorobenzene	98.9	72-107	%REC	1	3/15/2007
Surr: Dibromofluoromethane	96.5	56.6-105	%REC	1	3/15/2007
Surr: Toluene-d8	95.1	83.4-104	%REC	1	3/15/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits 46 / 92

Page 45 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2						Analyst: ADM
Oil & Grease, Total Recoverable	42000	2000	mg/Kg	100	3/23/2007	
EPA METHOD 418.1: TPH						Analyst: BL
Petroleum Hydrocarbons, TR	42000	2000	mg/Kg	100	3/23/2007	

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits 47 / 92
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 46 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-10 **Collection Date:** 3/10/2007 11:20:00 AM
Client Sample ID: S-6 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES						Analyst: SCC
4,4'-DDD	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
4,4'-DDE	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
4,4'-DDT	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Aldrin	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
alpha-BHC	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
beta-BHC	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Chlordane	ND	0.25		mg/Kg	1	3/27/2007 11:11:09 PM
delta-BHC	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Dieldrin	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Endosulfan I	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Endosulfan II	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Endosulfan sulfate	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Endrin	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Endrin aldehyde	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
gamma-BHC	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Heptachlor	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Heptachlor epoxide	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Methoxychlor	ND	0.0020		mg/Kg	1	3/27/2007 11:11:09 PM
Toxaphene	ND	0.25		mg/Kg	1	3/27/2007 11:11:09 PM
Surr: Decachlorobiphenyl	88.8	56.9-154		%REC	1	3/27/2007 11:11:09 PM
Surr: Tetrachloro-m-xylene	80.4	51.5-116		%REC	1	3/27/2007 11:11:09 PM
EPA METHOD 8082: PCB'S						Analyst: JAT
Aroclor 1016	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1221	ND	0.25		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1232	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1242	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1248	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1254	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Aroclor 1260	ND	0.020		mg/Kg	1	3/15/2007 5:20:47 PM
Surr: Decachlorobiphenyl	42.8	50.1-115	S	%REC	1	3/15/2007 5:20:47 PM
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	ND	0.25		mg/Kg	1	3/28/2007 2:30:51 PM
1-Methylnaphthalene	ND	0.25		mg/Kg	1	3/28/2007 2:30:51 PM
2-Methylnaphthalene	ND	0.25		mg/Kg	1	3/28/2007 2:30:51 PM
Acenaphthylene	ND	0.25		mg/Kg	1	3/28/2007 2:30:51 PM
Acenaphthene	ND	0.25		mg/Kg	1	3/28/2007 2:30:51 PM
Fluorene	ND	0.030		mg/Kg	1	3/28/2007 2:30:51 PM
Phenanthrene	ND	0.015		mg/Kg	1	3/28/2007 2:30:51 PM

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

48 / 92

Page 47 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. Lab Order: 0703134
Project: GNEP

EPA METHOD 8310: PAHS					Analyst: JMP
Anthracene	ND	0.015	mg/Kg	1	3/28/2007 2:30:51 PM
Fluoranthene	ND	0.020	mg/Kg	1	3/28/2007 2:30:51 PM
Pyrene	ND	0.025	mg/Kg	1	3/28/2007 2:30:51 PM
Benz(a)anthracene	ND	0.0020	mg/Kg	1	3/28/2007 2:30:51 PM
Chrysene	ND	0.011	mg/Kg	1	3/28/2007 2:30:51 PM
Benzo(b)fluoranthene	ND	0.0040	mg/Kg	1	3/28/2007 2:30:51 PM
Benzo(k)fluoranthene	ND	0.0010	mg/Kg	1	3/28/2007 2:30:51 PM
Benzo(a)pyrene	ND	0.0010	mg/Kg	1	3/28/2007 2:30:51 PM
Dibenz(a,h)anthracene	ND	0.0030	mg/Kg	1	3/28/2007 2:30:51 PM
Benzo(g,h,i)perylene	ND	0.0030	mg/Kg	1	3/28/2007 2:30:51 PM
Indeno(1,2,3-cd)pyrene	ND	0.0040	mg/Kg	1	3/28/2007 2:30:51 PM
Surr: Benzo(e)pyrene	84.5	52.8-123	%REC	1	3/28/2007 2:30:51 PM
EPA METHOD 9056A: ANIONS					Analyst: TES
Chloride	150	3.0	mg/Kg	10	3/23/2007 5:43:44 AM
EPA METHOD 7471: MERCURY					Analyst: MAP
Mercury	ND	0.033	mg/Kg	1	3/21/2007
EPA METHOD 6010B: SOIL METALS					Analyst: NMO
Arsenic	16	2.5	mg/Kg	1	3/27/2007 9:29:41 AM
Barium	57	1.0	mg/Kg	10	3/27/2007 11:00:00 AM
Cadmium	ND	0.10	mg/Kg	1	3/27/2007 9:29:41 AM
Chromium	5.3	0.30	mg/Kg	1	3/27/2007 9:29:41 AM
Lead	0.71	0.25	mg/Kg	1	3/27/2007 9:29:41 AM
Selenium	ND	2.5	mg/Kg	1	3/27/2007 9:29:41 AM
Silver	ND	0.25	mg/Kg	1	3/27/2007 9:29:41 AM
Thallium	ND	2.5	mg/Kg	1	3/27/2007 9:29:41 AM
Uranium	ND	5.0	mg/Kg	1	3/27/2007 9:29:41 AM
EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Acenaphthene	ND	0.20	mg/Kg	1	3/26/2007
Acenaphthylene	ND	0.20	mg/Kg	1	3/26/2007
Aniline	ND	0.20	mg/Kg	1	3/26/2007
Anthracene	ND	0.20	mg/Kg	1	3/26/2007
Azobenzene	ND	0.20	mg/Kg	1	3/26/2007
Benz(a)anthracene	ND	0.25	mg/Kg	1	3/26/2007
Benzo(a)pyrene	ND	0.20	mg/Kg	1	3/26/2007
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	3/26/2007
Benzo(g,h,i)perylene	ND	0.30	mg/Kg	1	3/26/2007
Benzo(k)fluoranthene	ND	0.50	mg/Kg	1	3/26/2007
Benzoic acid	ND	0.50	mg/Kg	1	3/26/2007
Benzyl alcohol	ND	1.0	mg/Kg	1	3/26/2007
Bis(2-chloroethoxy)methane	ND	0.50	mg/Kg	1	3/26/2007
Bis(2-chloroethyl)ether	ND	0.25	mg/Kg	1	3/26/2007

Qualifiers:
- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits 49 / 92

Page 48 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES					Analyst: BL
Bis(2-chloroisopropyl)ether	ND	0.50	mg/Kg	1	3/26/2007
Bis(2-ethylhexyl)phthalate	ND	0.20	mg/Kg	1	3/26/2007
4-Bromophenyl phenyl ether	ND	0.25	mg/Kg	1	3/26/2007
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	3/26/2007
Carbazole	ND	0.20	mg/Kg	1	3/26/2007
4-Chloro-3-methylphenol	ND	0.20	mg/Kg	1	3/26/2007
4-Chloroaniline	ND	0.20	mg/Kg	1	3/26/2007
2-Chloronaphthalene	ND	0.20	mg/Kg	1	3/26/2007
2-Chlorophenol	ND	0.20	mg/Kg	1	3/26/2007
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	3/26/2007
Chrysene	ND	0.20	mg/Kg	1	3/26/2007
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	3/26/2007
Di-n-octyl phthalate	ND	0.50	mg/Kg	1	3/26/2007
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	3/26/2007
Dibenzofuran	ND	0.50	mg/Kg	1	3/26/2007
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	3/26/2007
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	3/26/2007
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	3/26/2007
3,3'-Dichlorobenzidine	ND	0.20	mg/Kg	1	3/26/2007
Diethyl phthalate	ND	0.20	mg/Kg	1	3/26/2007
Dimethyl phthalate	ND	0.20	mg/Kg	1	3/26/2007
2,4-Dichlorophenol	ND	0.20	mg/Kg	1	3/26/2007
2,4-Dimethylphenol	ND	0.20	mg/Kg	1	3/26/2007
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	3/26/2007
2,4-Dinitrophenol	ND	0.50	mg/Kg	1	3/26/2007
2,4-Dinitrotoluene	ND	0.20	mg/Kg	1	3/26/2007
2,6-Dinitrotoluene	ND	0.20	mg/Kg	1	3/26/2007
Fluoranthene	ND	0.20	mg/Kg	1	3/26/2007
Fluorene	ND	0.20	mg/Kg	1	3/26/2007
Hexachlorobenzene	ND	0.20	mg/Kg	1	3/26/2007
Hexachlorobutadiene	ND	0.20	mg/Kg	1	3/26/2007
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	3/26/2007
Hexachloroethane	ND	0.50	mg/Kg	1	3/26/2007
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg	1	3/26/2007
Isophorone	ND	0.20	mg/Kg	1	3/26/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/26/2007
2-Methylphenol	ND	0.20	mg/Kg	1	3/26/2007
3+4-Methylphenol	ND	0.20	mg/Kg	1	3/26/2007
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	3/26/2007
N-Nitrosodimethylamine	ND	0	mg/Kg	1	3/26/2007
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	3/26/2007
Naphthalene	ND	0.20	mg/Kg	1	3/26/2007
2-Nitroaniline	ND	0.50	mg/Kg	1	3/26/2007
3-Nitroaniline	ND	0.50	mg/Kg	1	3/26/2007
4-Nitroaniline	ND	0.25	mg/Kg	1	3/26/2007

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits 50 / 92		

Page 49 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8270C: SEMIVOLATILES					**Analyst: BL**
Nitrobenzene	ND	0.20	mg/Kg	1	3/26/2007
2-Nitrophenol	ND	0.20	mg/Kg	1	3/26/2007
4-Nitrophenol	ND	0.20	mg/Kg	1	3/26/2007
Pentachlorophenol	ND	0.50	mg/Kg	1	3/26/2007
Phenanthrene	ND	0.20	mg/Kg	1	3/26/2007
Phenol	ND	0.20	mg/Kg	1	3/26/2007
Pyrene	ND	0.20	mg/Kg	1	3/26/2007
Pyridine	ND	0.50	mg/Kg	1	3/26/2007
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	3/26/2007
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	3/26/2007
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	3/26/2007
Surr: 2,4,6-Tribromophenol	85.7	35.5-141	%REC	1	3/26/2007
Surr: 2-Fluorobiphenyl	69.3	30.4-126	%REC	1	3/26/2007
Surr: 2-Fluorophenol	65.0	28.1-129	%REC	1	3/26/2007
Surr: 4-Terphenyl-d14	103	34.6-151	%REC	1	3/26/2007
Surr: Nitrobenzene-d5	63.2	26.5-122	%REC	1	3/26/2007
Surr: Phenol-d5	72.7	37.6-118	%REC	1	3/26/2007
EPA METHOD 8260B: VOLATILES					**Analyst: SMP**
Benzene	ND	0.050	mg/Kg	1	3/15/2007
Toluene	ND	0.050	mg/Kg	1	3/15/2007
Ethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	3/15/2007
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	3/15/2007
Naphthalene	ND	0.10	mg/Kg	1	3/15/2007
1-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
2-Methylnaphthalene	ND	0.20	mg/Kg	1	3/15/2007
Acetone	ND	0.75	mg/Kg	1	3/15/2007
Bromobenzene	ND	0.050	mg/Kg	1	3/15/2007
Bromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromodichloromethane	ND	0.050	mg/Kg	1	3/15/2007
Bromoform	ND	0.050	mg/Kg	1	3/15/2007
Bromomethane	ND	0.10	mg/Kg	1	3/15/2007
2-Butanone	ND	0.50	mg/Kg	1	3/15/2007
Carbon disulfide	ND	0.50	mg/Kg	1	3/15/2007
Carbon tetrachloride	ND	0.10	mg/Kg	1	3/15/2007
Chlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Chloroethane	ND	0.10	mg/Kg	1	3/15/2007
Chloroform	ND	0.050	mg/Kg	1	3/15/2007
Chloromethane	ND	0.050	mg/Kg	1	3/15/2007
2-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Chlorotoluene	ND	0.050	mg/Kg	1	3/15/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

51 / 92

Page 50 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES					Analyst: SMP
cis-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	3/15/2007
Dibromochloromethane	ND	0.050	mg/Kg	1	3/15/2007
Dibromomethane	ND	0.10	mg/Kg	1	3/15/2007
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,1-Dichloroethane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloroethene	ND	0.050	mg/Kg	1	3/15/2007
1,2-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
1,3-Dichloropropane	ND	0.050	mg/Kg	1	3/15/2007
2,2-Dichloropropane	ND	0.10	mg/Kg	1	3/15/2007
1,1-Dichloropropene	ND	0.10	mg/Kg	1	3/15/2007
Hexachlorobutadiene	ND	0.10	mg/Kg	1	3/15/2007
2-Hexanone	ND	0.50	mg/Kg	1	3/15/2007
Isopropylbenzene	ND	0.050	mg/Kg	1	3/15/2007
4-Isopropyltoluene	ND	0.050	mg/Kg	1	3/15/2007
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	3/15/2007
Methylene chloride	ND	0.15	mg/Kg	1	3/15/2007
n-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
n-Propylbenzene	ND	0.050	mg/Kg	1	3/15/2007
sec-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
Styrene	ND	0.050	mg/Kg	1	3/15/2007
tert-Butylbenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	3/15/2007
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	3/15/2007
trans-1,2-DCE	ND	0.050	mg/Kg	1	3/15/2007
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	3/15/2007
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	3/15/2007
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	3/15/2007
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	3/15/2007
Trichlorofluoromethane	ND	0.050	mg/Kg	1	3/15/2007
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	3/15/2007
Vinyl chloride	ND	0.050	mg/Kg	1	3/15/2007
Xylenes, Total	ND	0.10	mg/Kg	1	3/15/2007
Surr: 1,2-Dichloroethane-d4	89.7	62.1-102	%REC	1	3/15/2007
Surr: 4-Bromofluorobenzene	95.1	72-107	%REC	1	3/15/2007
Surr: Dibromofluoromethane	98.7	56.6-105	%REC	1	3/15/2007
Surr: Toluene-d8	99.0	83.4-104	%REC	1	3/15/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

52 / 92

Page 51 of 54

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

OIL AND GREASE BY 413.2					**Analyst: ADM**
Oil & Grease, Total Recoverable	31	20	mg/Kg	1	3/23/2007
EPA METHOD 418.1: TPH					**Analyst: BL**
Petroleum Hydrocarbons, TR	31	20	mg/Kg	1	3/23/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limit 53 / 92		

Page 52 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

Lab ID: 0703134-11 **Collection Date:**
Client Sample ID: Trip Blank **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						**Analyst: LMM**
Iodomethane	ND	40		µg/L	1	3/20/2007
trans-1,4-Dichloro-2-butene	ND	100		µg/L	1	3/20/2007
Vinyl Acetate	ND	50		µg/L	1	3/20/2007
Benzene	ND	1.0		µg/L	1	3/20/2007
Toluene	ND	1.0		µg/L	1	3/20/2007
Ethylbenzene	ND	1.0		µg/L	1	3/20/2007
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/20/2007
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/20/2007
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/20/2007
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/20/2007
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/20/2007
Naphthalene	ND	2.0		µg/L	1	3/20/2007
1-Methylnaphthalene	ND	4.0		µg/L	1	3/20/2007
2-Methylnaphthalene	ND	4.0		µg/L	1	3/20/2007
Acetone	ND	10		µg/L	1	3/20/2007
Acrylonitrile	ND	200		µg/L	1	3/20/2007
Bromobenzene	ND	1.0		µg/L	1	3/20/2007
Bromochloromethane	ND	1.0		µg/L	1	3/20/2007
Bromodichloromethane	ND	1.0		µg/L	1	3/20/2007
Bromoform	ND	1.0		µg/L	1	3/20/2007
Bromomethane	ND	1.0		µg/L	1	3/20/2007
2-Butanone	ND	10		µg/L	1	3/20/2007
Carbon disulfide	ND	10		µg/L	1	3/20/2007
Carbon Tetrachloride	ND	1.0		µg/L	1	3/20/2007
Chlorobenzene	ND	1.0		µg/L	1	3/20/2007
Chloroethane	ND	2.0		µg/L	1	3/20/2007
Chloroform	ND	1.0		µg/L	1	3/20/2007
Chloromethane	ND	1.0		µg/L	1	3/20/2007
2-Chlorotoluene	ND	1.0		µg/L	1	3/20/2007
4-Chlorotoluene	ND	1.0		µg/L	1	3/20/2007
cis-1,2-DCE	ND	1.0		µg/L	1	3/20/2007
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/20/2007
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/20/2007
Dibromochloromethane	ND	1.0		µg/L	1	3/20/2007
Dibromomethane	ND	1.0		µg/L	1	3/20/2007
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/20/2007
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/20/2007
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/20/2007
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/20/2007
1,1-Dichloroethane	ND	1.0		µg/L	1	3/20/2007

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

54 / 92

Page 53 of 54

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

CLIENT: Gordon Environmental, Inc. **Lab Order:** 0703134
Project: GNEP

EPA METHOD 8260B: VOLATILES Analyst: LMM

1,1-Dichloroethene	ND	1.0	µg/L	1	3/20/2007
1,2-Dichloropropane	ND	1.0	µg/L	1	3/20/2007
1,3-Dichloropropane	ND	1.0	µg/L	1	3/20/2007
2,2-Dichloropropane	ND	2.0	µg/L	1	3/20/2007
1,1-Dichloropropene	ND	1.0	µg/L	1	3/20/2007
Hexachlorobutadiene	ND	1.0	µg/L	1	3/20/2007
2-Hexanone	ND	10	µg/L	1	3/20/2007
Isopropylbenzene	ND	1.0	µg/L	1	3/20/2007
4-Isopropyltoluene	ND	1.0	µg/L	1	3/20/2007
4-Methyl-2-pentanone	ND	10	µg/L	1	3/20/2007
Methylene Chloride	ND	1.0	µg/L	1	3/20/2007
n-Butylbenzene	ND	1.0	µg/L	1	3/20/2007
n-Propylbenzene	ND	1.0	µg/L	1	3/20/2007
sec-Butylbenzene	ND	1.0	µg/L	1	3/20/2007
Styrene	ND	1.0	µg/L	1	3/20/2007
tert-Butylbenzene	ND	1.0	µg/L	1	3/20/2007
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	3/20/2007
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	3/20/2007
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	3/20/2007
trans-1,2-DCE	ND	1.0	µg/L	1	3/20/2007
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	3/20/2007
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	3/20/2007
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	3/20/2007
1,1,1-Trichloroethane	ND	1.0	µg/L	1	3/20/2007
1,1,2-Trichloroethane	ND	1.0	µg/L	1	3/20/2007
Trichloroethene (TCE)	ND	1.0	µg/L	1	3/20/2007
Trichlorofluoromethane	ND	1.0	µg/L	1	3/20/2007
1,2,3-Trichloropropane	ND	2.0	µg/L	1	3/20/2007
Vinyl chloride	ND	1.0	µg/L	1	3/20/2007
Xylenes, Total	ND	1.5	µg/L	1	3/20/2007
Surr: 1,2-Dichloroethane-d4	96.4	76.6-113	%REC	1	3/20/2007
Surr: 4-Bromofluorobenzene	102	77-117	%REC	1	3/20/2007
Surr: Dibromofluoromethane	86.0	72.3-121	%REC	1	3/20/2007
Surr: Toluene-d8	98.9	73-113	%REC	1	3/20/2007

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limit 55 / 92		

Page 54 of 54

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030533-001
Client Sample ID: Spring 1

Report Date: 03/30/07
Collection Date: 03/10/07 12:40
DateReceived: 03/13/07
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Manual Distillation	ND	mg/L		0.0050		E335.4	03/21/07 15:53 / sbb
Inorganic Carbon, Total (TIC)	33.3	mg/L		1.0		SW9060	03/14/07 14:56 / jl
Organic Carbon, Total (TOC)	19.3	mg/L		1.0		A5310 B	03/13/07 15:10 / jl
METALS - TOTAL							
Antimony	0.004	mg/L	D	0.002		SW6020	03/20/07 13:31 / sml
Arsenic	0.075	mg/L		0.001		SW6020	03/16/07 15:16 / sml
Selenium	ND	mg/L	D	0.002		SW6020	03/16/07 15:16 / sml
Thallium	0.012	mg/L		0.001		SW6020	03/20/07 13:31 / sml
Uranium	0.232	mg/L		0.001		SW6020	03/20/07 13:31 / sml
RADIONUCLIDES - TOTAL							
Radium 226	3.7	pCi/L		0.2		E903.0	03/24/07 20:10 / crw
Radium 226 precision (±)	1.0	pCi/L				E903.0	03/24/07 20:10 / crw
Radium 228	1.7	pCi/L		1.0		RA-05	03/19/07 11:52 / pj
Radium 228 precision (±)	0.9	pCi/L				RA-05	03/19/07 11:52 / pj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

56 / 92

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030533-002
Client Sample ID: LG West

Report Date: 03/30/07
Collection Date: 03/10/07 13:40
DateReceived: 03/13/07
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Manual Distillation	ND	mg/L		0.0050		E335.4	03/21/07 15:55 / sl-b
Inorganic Carbon, Total (TIC)	42.9	mg/L		1.0		SW9060	03/14/07 15:25 / jl
Organic Carbon, Total (TOC)	48.1	mg/L		1.0		A5310 B	03/13/07 15:17 / jl
METALS - TOTAL							
Antimony	0.004	mg/L	D	0.002		SW6020	03/20/07 13:39 / sml
Arsenic	0.120	mg/L		0.001		SW6020	03/20/07 13:39 / sml
Selenium	ND	mg/L	D	0.004		SW6020	03/20/07 13:39 / sml
Thallium	0.003	mg/L		0.001		SW6020	03/20/07 13:39 / sml
Uranium	0.166	mg/L		0.001		SW6020	03/20/07 13:39 / sml
RADIONUCLIDES - TOTAL							
Radium 226	2.0	pCi/L		0.2		E903.0	03/24/07 21:10 / crw
Radium 226 precision (±)	0.7	pCi/L				E903.0	03/24/07 21:10 / crw
Radium 228	ND	pCi/L		1.0		RA-05	03/19/07 11:52 / pj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

57 / 92

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030533-003
Client Sample ID: Galuna

Report Date: 03/30/07
Collection Date: 03/10/07 15:00
DateReceived: 03/13/07
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Manual Distillation	ND	mg/L		0.0050		E335.4	03/21/07 15:57 / ek-b
Inorganic Carbon, Total (TIC)	35.1	mg/L		1.0		SW9060	03/14/07 15:33 / jl
Organic Carbon, Total (TOC)	146	mg/L	D	1.5		A5310 B	03/13/07 16:10 / jl
METALS - TOTAL							
Antimony	0.006	mg/L	D	0.002		SW6020	03/16/07 15:31 / sml
Arsenic	0.284	mg/L		0.001		SW6020	03/16/07 15:31 / sml
Selenium	ND	mg/L	D	0.004		SW6020	03/16/07 15:31 / sml
Thallium	0.008	mg/L		0.001		SW6020	03/20/07 13:46 / sml
Uranium	0.317	mg/L	D	0.002		SW6020	03/20/07 13:46 / sml
RADIONUCLIDES - TOTAL							
Radium 226	10.0	pCi/L		0.2		E903.0	03/24/07 22:11 / crw
Radium 226 precision (±)	2.1	pCi/L				E903.0	03/24/07 22:11 / crw
Radium 228	14.1	pCi/L		1.0		RA-05	03/19/07 13:32 / plj
Radium 228 precision (±)	2.5	pCi/L				RA-05	03/19/07 13:32 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

58 / 92

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030533-004
Client Sample ID: P-2

Report Date: 03/30/07
Collection Date: 03/10/07 17:10
DateReceived: 03/13/07
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Manual Distillation	ND	mg/L		0.0050		E335.4	03/21/07 16:05 / elh
Inorganic Carbon, Total (TIC)	34.6	mg/L		1.0		SW9060	03/14/07 15:18 / jl
Organic Carbon, Total (TOC)	8.4	mg/L		1.0		A5310 B	03/13/07 15:43 / jl
METALS - TOTAL							
Antimony	ND	mg/L		0.001		SW6020	03/16/07 15:39 / sml
Arsenic	0.015	mg/L		0.001		SW6020	03/16/07 15:39 / sml
Selenium	ND	mg/L	D	0.002		SW6020	03/16/07 15:39 / sml
Thallium	0.017	mg/L		0.001		SW6020	03/20/07 13:54 / sml
Uranium	0.067	mg/L	D	0.002		SW6020	03/20/07 13:54 / sml
RADIONUCLIDES - TOTAL							
Radium 226	6.6	pCi/L		0.2		E903.0	03/24/07 23:11 / crw
Radium 226 precision (±)	1.2	pCi/L				E903.0	03/24/07 23:11 / crw
Radium 228	9.8	pCi/L		1.0		RA-05	03/19/07 13:32 / pij
Radium 228 precision (±)	1.1	pCi/L				RA-05	03/19/07 13:32 / pij

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

59 / 92

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Hall Environmental	**Report Date:**	04/05/07
Project:	0703134	**Collection Date:**	03/10/07 08:37
Lab ID:	C07030553-001	**DateReceived:**	03/13/07
Client Sample ID:	0703134-05 S-1	**Matrix:**	Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	1.61	g/cc		0.10		E1109	03/15/07 12:00 / jrs
RADIONUCLIDES - GAMMA							
Radium 226	15.4	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Radium 226 precision (±)	2.1	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	34.4	pCi/g-dry		1.0		E900.0	03/20/07 15:30 / res
Gross Alpha precision (±)	1.2	pCi/g-dry				E900.0	03/20/07 15:30 / res
Gross Beta	35.7	pCi/g-dry		2.0		E900.0	03/20/07 15:30 / res
Gross Beta precision (±)	0.8	pCi/g-dry				E900.0	03/20/07 15:30 / res

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

60/92

Track#C07030553 Page 2

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030553-002
Client Sample ID: 0703134-06 S-2

Report Date: 04/05/07
Collection Date: 03/10/07 08:50
DateReceived: 03/13/07
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	2.27	g/cc		0.10		E1109	03/15/07 12:00/ jrs
RADIONUCLIDES - GAMMA							
Radium 226	1.7	pCi/g-dry		0.1		E901.1	04/02/07 09:30/ dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	04/02/07 09:30/ dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30/ dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	7.2	pCi/g-dry		1.0		E900.0	03/20/07 15:30/ res
Gross Alpha precision (±)	0.6	pCi/g-dry				E900.0	03/20/07 15:30/ res
Gross Beta	14.8	pCi/g-dry		2.0		E900.0	03/20/07 15:30/ res
Gross Beta precision (±)	0.6	pCi/g-dry				E900.0	03/20/07 15:30/ res

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

61/92

Track#C07030553 Page 3

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030553-003
Client Sample ID: 0703134-07 S-3

Report Date: 04/05/07
Collection Date: 03/10/07 09:06
DateReceived: 03/13/07
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	1.39	g/cc		0.10		E1109	03/15/07 12:00 / jrs
RADIONUCLIDES - GAMMA							
Radium 226	17.8	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Radium 226 precision (±)	2.2	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	37.2	pCi/g-dry		1.0		E900.0	03/20/07 15:30 / res
Gross Alpha precision (±)	1.2	pCi/g-dry				E900.0	03/20/07 15:30 / res
Gross Beta	41.8	pCi/g-dry		2.0		E900.0	03/20/07 15:30 / res
Gross Beta precision (±)	0.8	pCi/g-dry				E900.0	03/20/07 15:30 / res

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

62/92

Track#C07030553 Page 4

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Hall Environmental	**Report Date:**	04/05/07
Project:	0703134	**Collection Date:**	03/10/07 09:26
Lab ID:	C07030553-004	**DateReceived:**	03/13/07
Client Sample ID:	0703134-08 S-4	**Matrix:**	Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	2.27	g/cc		0.10		E1109	03/15/07 12:00 / jrs
RADIONUCLIDES - GAMMA							
Radium 226	1.8	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	7.1	pCi/g-dry		1.0		E900.0	03/20/07 15:30 / res
Gross Alpha precision (±)	0.6	pCi/g-dry				E900.0	03/20/07 15:30 / res
Gross Beta	25.0	pCi/g-dry		2.0		E900.0	03/20/07 15:30 / res
Gross Beta precision (±)	0.7	pCi/g-dry				E900.0	03/20/07 15:30 / res

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

63/92

Track#C07030553 Page 5

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Hall Environmental	**Report Date:**	04/05/07
Project:	0703134	**Collection Date:**	03/10/07 10:15
Lab ID:	C07030553-005	**DateReceived:**	03/13/07
Client Sample ID:	0703134-09 S-5	**Matrix:**	Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	1.67	g/cc		0.10		E1109	03/15/07 12:00/ jrs
RADIONUCLIDES - GAMMA							
Radium 226	20.7	pCi/g-dry		0.1		E901.1	04/02/07 09:30/ dpb
Radium 226 precision (±)	2.7	pCi/g-dry				E901.1	04/02/07 09:30/ dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30/ dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	38.2	pCi/g-dry		1.0		E900.0	03/20/07 15:30/ rcs
Gross Alpha precision (±)	1.2	pCi/g-dry				E900.0	03/20/07 15:30/ rcs
Gross Beta	45.2	pCi/g-dry		2.0		E900.0	03/20/07 15:30/ rcs
Gross Beta precision (±)	0.8	pCi/g-dry				E900.0	03/20/07 15:30/ rcs

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

64/92

Track#C07030553 Page 6

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030553-008
Client Sample ID: 0703134-010 S-6

Report Date: 04/05/07
Collection Date: 03/10/07 11:20
DateReceived: 03/13/07
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	2.50	g/cc		0.10		E1109	03/15/07 12:00 / jrs
RADIONUCLIDES - GAMMA							
Radium 226	1.3	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Radium 228	ND	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	12.3	pCi/g-dry		1.0		E900.0	03/20/07 15:30 / res
Gross Alpha precision (±)	0.8	pCi/g-dry				E900.0	03/20/07 15:30 / res
Gross Beta	13.2	pCi/g-dry		2.0		E900.0	03/20/07 15:30 / res
Gross Beta precision (±)	0.6	pCi/g-dry				E900.0	03/20/07 15:30 / res

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.
MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

65/92

Track#C07030553 Page 7

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0703134
Lab ID: C07030553-007
Client Sample ID: 0703134-012 P-1

Report Date: 04/05/07
Collection Date: 03/10/07 10:30
DateReceived: 03/13/07
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Density	2.50	g/cc		0.10		E1109	03/15/07 12:00 / jrs
RADIONUCLIDES - GAMMA							
Actinium 228	1.6	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Actinium 228 precision (±)	0.6	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Bismuth 214	0.9	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Bismuth 214 precision (±)	0.3	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Lead 212	1.8	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Lead 212 precision (±)	0.3	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Lead 214	1.4	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Lead 214 precision (±)	0.5	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Potassium 40	25.3	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Potassium 40 precision (±)	6.2	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Radium 226	0.9	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
Gross Gamma	34.1	pCi/g-dry		0.1		E901.1	04/02/07 09:30 / dpb
Gross Gamma precision (±)	7.6	pCi/g-dry				E901.1	04/02/07 09:30 / dpb
RADIONUCLIDES - TOTAL							
Gross Alpha	7.4	pCi/g-dry		1.0		E900.0	03/20/07 15:30 / res
Gross Alpha precision (±)	0.6	pCi/g-dry				E900.0	03/20/07 15:30 / res
Gross Beta	30.1	pCi/g-dry		2.0		E900.0	03/20/07 15:30 / res
Gross Beta precision (±)	0.7	pCi/g-dry				E900.0	03/20/07 15:30 / res

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

66/92

Track#C07030553 Page 8

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 04/05/07
Work Order: C07030553

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0									**Batch: 13867**
Sample ID: MB-R81112	Method Blank				Run: G5000W_070320A				03/20/07 15:30
Gross Alpha	ND	pCi/g-dry	0.5						
Gross Beta	ND	pCi/g-dry	1						
Sample ID: LCS-R81112	Laboratory Control Sample				Run: G5000W_070320A				03/20/07 15:30
Gross Alpha	502	pCi/g-dry	1.0	99	70	130			
Gross Beta	418	pCi/g-dry	2.0	107	70	130			
Sample ID: C07030553-001AMD	Sample Duplicate				Run: G5000W_070320A				03/20/07 15:30
Gross Alpha	38.7	pCi/g-dry	1.0		70	130	12	30	
Gross Beta	34.8	pCi/g-dry	2.0		70	130	2.6	30	

Qualifiers:
RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

67 / 92

Track#C07030553 Page 9

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 04/05/07
Work Order: C07030553

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1									**Batch: 13865**
Sample ID: MB-R81666	**Method Blank**					**Run: GAMMA EGG-ORTEC_07040**			**04/02/07 09:30**
Actinium 228	ND	pCi/g-dry	0.05						
Americium 241	ND	pCi/g-dry	0.05						
Barium 133	ND	pCi/g-dry	0.05						
Bismuth 212	ND	pCi/g-dry	0.05						
Bismuth 214	ND	pCi/g-dry	0.05						
Cesium 134	ND	pCi/g-dry	0.05						
Cesium 137	ND	pCi/g-dry	0.05						
Cobalt 60	ND	pCi/g-dry	0.05						
Iodine 125	ND	pCi/g-dry	0.05						
Iodine 131	ND	pCi/g-dry	0.05						
Lead 212	ND	pCi/g-dry	0.05						
Lead 214	ND	pCi/g-dry	0.05						
Manganese 54	ND	pCi/g-dry	0.05						
Potassium 40	ND	pCi/g-dry	0.05						
Radium 223	ND	pCi/g-dry	0.05						
Radium 224	ND	pCi/g-dry	0.05						
Strontium 86	ND	pCi/g-dry	0.05						
Strontium 87	ND	pCi/g-dry	0.05						
Thallium 208	ND	pCi/g-dry	0.05						
Thorium 228	ND	pCi/g-dry	0.05						
Thorium 234	ND	pCi/g-dry	0.05						
Zinc 65	ND	pCi/g-dry	0.05						
Radium 226	ND	pCi/g-dry	0.05						
Radium 226	ND	pCi/g-dry	0.05						
Gross Gamma	ND	pCi/g-dry	0.05						
Sample ID: C07030705-002Adup	**Sample Duplicate**					**Run: GAMMA EGG-ORTEC_07040**			**04/02/07 09:30**
Actinium 228	ND	pCi/g-dry	0.10				0.0	30	
Americium 241	ND	pCi/g-dry	0.10				0.0	30	
Barium 133	ND	pCi/g-dry	0.10				0.0	30	
Bismuth 212	ND	pCi/g-dry	0.10				0.0	30	
Bismuth 214	7.50	pCi/g-dry	0.10				0.0	30	
Cesium 134	ND	pCi/g-dry	0.10				0.0	30	
Cesium 137	ND	pCi/g-dry	0.10				0.0	30	
Cobalt 60	ND	pCi/g-dry	0.10				0.0	30	
Iodine 125	ND	pCi/g-dry	0.10				0.0	30	
Iodine 131	ND	pCi/g-dry	0.10				0.0	30	
Lead 214	6.90	pCi/g-dry	0.10				2.2	30	
Manganese 54	ND	pCi/g-dry	0.10				0.0	30	
Potassium 40	30.2	pCi/g-dry	0.10				7.6	30	
Radium 223	ND	pCi/g-dry	0.10				0.0	30	

Qualifiers:
RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

68/92

Track#C07030553 Page 10

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 04/05/07
Work Order: C07030553

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1									Batch: 13865
Sample ID: C07030705-002Adup	Sample Duplicate					Run: GAMMA EGG-ORTEC_07040		04/02/07 09:30	
Radium 224	ND	pCi/g-dry	0.10				0.0	30	
Strontium 86	ND	pCi/g-dry	0.10				0.0	30	
Strontium 87	ND	pCi/g-dry	0.10				0.0	30	
Thallium 208	ND	pCi/g-dry	0.10				0.0	30	
Thorium 228	ND	pCi/g-dry	0.10				0.0	30	
Thorium 234	ND	pCi/g-dry	0.10				0.0	30	
Zinc 65	ND	pCi/g-dry	0.10				0.0	30	
Radium 226	7.50	pCi/g-dry	0.10				0.0	30	
Radium 228	ND	pCi/g-dry	0.10				0.0	30	
Gross Gamma	40.5	pCi/g-dry	0.10				13	30	

Qualifiers:
RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

69/92

Track#C07030553 Page 11

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 03/30/07
Work Order: C07030533

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A5310 B									Batch: R60811
Sample ID: MBLK	Method Blank				Run: TOC2-C_070313A				03/13/07 11:38
Organic Carbon, Total (TOC)	ND	mg/L	0.5						
Sample ID: LCS1-C2933	Laboratory Control Sample				Run: TOC2-C_070313A				03/13/07 13:31
Organic Carbon, Total (TOC)	49.6	mg/L	1.0	99	90	110			
Sample ID: C07030520-008DMS1	Sample Matrix Spike				Run: TOC2-C_070313A				03/13/07 15:57
Organic Carbon, Total (TOC)	45.6	mg/L	1.0	104	85	115			
Sample ID: C07030520-008DMS1	Sample Matrix Spike				Run: TOC2-C_070313A				03/13/07 16:03
Organic Carbon, Total (TOC)	45.4	mg/L	1.0	103	85	115			
Sample ID: C07030520-008DMSD1	Sample Matrix Spike Duplicate				Run: TOC2-C_070313A				03/13/07 16:23
Organic Carbon, Total (TOC)	46.1	mg/L	1.0	105	85	115	1.0	10	
Sample ID: C07030520-008DMSD1	Sample Matrix Spike Duplicate				Run: TOC2-C_070313A				03/13/07 16:30
Organic Carbon, Total (TOC)	45.9	mg/L	1.0	105	85	115	0.6	10	
Method: E335.4									Batch: B_26099
Sample ID: LFB-4	Laboratory Fortified Blank				Run: SUB-B90992				03/21/07 15:06
Cyanide, Total Manual Distillation	0.100	mg/L	0.0050	100	90	110			
Sample ID: LCS-6	Laboratory Control Sample				Run: SUB-B90992				03/21/07 15:10
Cyanide, Total Manual Distillation	0.159	mg/L	0.0050	106	90	110			
Sample ID: MBLK-9	Method Blank				Run: SUB-B90992				03/21/07 15:15
Cyanide, Total Manual Distillation	ND	mg/L	0.001						
Sample ID: B07031273-003AMS	Sample Matrix Spike				Run: SUB-B90992				03/21/07 16:14
Cyanide, Total Manual Distillation	0.0896	mg/L	0.0050	87	90	110			S
Sample ID: B07031273-003AMSD	Sample Matrix Spike Duplicate				Run: SUB-B90992				03/21/07 16:15
Cyanide, Total Manual Distillation	0.0921	mg/L	0.0050	89	90	110	2.8	10	S
Method: E335.4									Analytical Run: SUB-B90992
Sample ID: ICV-1	Initial Calibration Verification Standard								03/21/07 14:46
Cyanide, Total Manual Distillation	0.157	mg/L	0.0050	105	90	110			

Qualifiers:
RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

70/92

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 03/30/07
Work Order: C07030533

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA226-1942
Sample ID: MB-RA226-1942	Method Blank				Run: TENNELEC-2_070319A				03/25/07 02:12
Radium 226	ND	pCi/L	0.2						
Sample ID: LCS-RA226-1942	Laboratory Control Sample				Run: TENNELEC-2_070319A				03/25/07 04:13
Radium 226	5.2	pCi/L	0.20	82	70	130			
Method: RA-05									Batch: RA228-1563
Sample ID: LCS-228-RA226-1942	Laboratory Control Sample				Run: TENNELEC-3_070314A				03/19/07 11:51
Radium 228	6.7	pCi/L	1.0	85	70	130			
Sample ID: MB-RA228-1942	Method Blank				Run: TENNELEC-3_070314A				03/19/07 11:51
Radium 228	ND	pCi/L	1						
Sample ID: C07030495-005GMS	Sample Matrix Spike				Run: TENNELEC-3_070314A				03/19/07 11:52
Radium 228	7.0	pCi/L	1.0	88	70	130			
Sample ID: C07030495-005GMSD	Sample Matrix Spike Duplicate				Run: TENNELEC-3_070314A				03/19/07 11:52
Radium 228	7.2	pCi/L	1.0	91	70	130	2.8	39.4	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

71 / 92

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 03/30/07
Work Order: C07030533

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: 13855
Sample ID: MB-13855	Method Blank				Run: ICPMS1-C_070316A				03/16/07 15:08
Antimony	0.0002	mg/L	0.0002						
Arsenic	ND	mg/L	9E-05						
Selenium	ND	mg/L	0.0004						
Thallium	0.0001	mg/L	4E-05						
Uranium	ND	mg/L	8E-05						
Sample ID: C07030583-004DMS4	Post Digestion Spike				Run: ICPMS1-C_070316A				03/16/07 16:46
Thallium	0.283	mg/L	0.10	113	75	125			
Uranium	0.367	mg/L	0.00038	109	75	125			
Sample ID: C07030583-004DMSD4	Post Digestion Spike Duplicate				Run: ICPMS1-C_070316A				03/16/07 16:54
Thallium	0.286	mg/L	0.10	114	75	125	0.8	20	
Uranium	0.372	mg/L	0.00038	112	75	125	1.6	20	
Sample ID: LCS1-13855	Laboratory Control Sample				Run: ICPMS1-C_070316A				03/16/07 17:01
Antimony	0.0446	mg/L	0.050	111	75	125			
Arsenic	0.0167	mg/L	0.0010	83	75	125			
Thallium	0.0219	mg/L	0.10	109	75	125			
Uranium	0.0205	mg/L	0.00030	103	75	125			
Sample ID: LCS-13855	Laboratory Control Sample				Run: ICPMS1-C_070316A				03/16/07 17:09
Antimony	0.564	mg/L	0.050	113	90	110			S
Arsenic	0.521	mg/L	0.0010	105	90	110			
Thallium	0.538	mg/L	0.10	108	90	110			
Uranium	0.523	mg/L	0.00076	105	90	110			
Sample ID: MB-13855	Method Blank				Run: ICPMS1-C_070320A				03/20/07 13:24
Antimony	0.0006	mg/L	0.0002						
Arsenic	0.0002	mg/L	9E-05						
Selenium	ND	mg/L	0.0004						
Thallium	ND	mg/L	4E-05						
Uranium	0.0001	mg/L	8E-05						
Sample ID: C07030583-004DMS4	Post Digestion Spike				Run: ICPMS1-C_070320A				03/20/07 15:01
Antimony	0.600	mg/L	0.050	120	75	125			
Arsenic	0.552	mg/L	0.0010	110	75	125			
Selenium	0.602	mg/L	0.0035	119	75	125			
Thallium	0.579	mg/L	0.10	116	75	125			
Uranium	0.625	mg/L	0.00076	107	75	125			
Sample ID: C07030583-004DMSD4	Post Digestion Spike Duplicate				Run: ICPMS1-C_070320A				03/20/07 15:08
Antimony	0.616	mg/L	0.050	123	75	125	2.5	20	

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

72/92

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 03/30/07
Work Order: C07030533

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020								Batch: 13855	
Sample ID: C07030583-004DMSD4	Post Digestion Spike Duplicate				Run: ICPMS1-C_070320A			03/20/07 15:08	
Arsenic	0.571	mg/L	0.0010	114	75	125	3.4	20	
Selenium	0.643	mg/L	0.0035	127	75	125	6.5	20	S
Thallium	0.580	mg/L	0.10	116	75	125	0.2	20	
Uranium	0.645	mg/L	0.00076	111	75	125	3.2	20	
- Matrix spike duplicate recoveries outside the acceptance criteria of 75 to 125 percent are considered matrix related, not system related. Reported values are within metho specifications.									
Sample ID: LCS1-13855	Laboratory Control Sample				Run: ICPMS1-C_070320A			03/20/07 15:16	
Antimony	0.0427	mg/L	0.050	105	75	125			
Arsenic	0.0174	mg/L	0.0010	88	75	125			
Selenium	0.0784	mg/L	0.0010	78	75	125			
Thallium	0.0220	mg/L	0.10	110	75	125			
Uranium	0.0200	mg/L	0.00030	99	75	125			
Sample ID: LCS-13855	Laboratory Control Sample				Run: ICPMS1-C_070320A			03/20/07 15:23	
Antimony	0.532	mg/L	0.050	106	90	110			
Arsenic	0.518	mg/L	0.0010	104	90	110			
Selenium	0.503	mg/L	0.0035	101	90	110			
Thallium	0.532	mg/L	0.10	106	90	110			
Uranium	0.488	mg/L	0.00076	98	90	110			
Sample ID: C07030648-001AMS	Sample Matrix Spike				Run: ICPMS1-C_070320A			03/20/07 22:05	
Antimony	0.0511	mg/L	0.0010	102	75	125			
Arsenic	0.0467	mg/L	0.0010	92	75	125			
Selenium	0.0395	mg/L	0.0010	78	75	125			
Thallium	0.0540	mg/L	0.0010	108	75	125			
Sample ID: C07030648-001AMSD	Sample Matrix Spike Duplicate				Run: ICPMS1-C_070320A			03/20/07 22:13	
Antimony	0.0515	mg/L	0.0010	103	75	125	0.9	20	
Arsenic	0.0459	mg/L	0.0010	90	75	125	1.9	20	
Selenium	0.0390	mg/L	0.0010	77	75	125	1.1	20	
Thallium	0.0530	mg/L	0.0010	106	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

73 / 92

QA/QC Summary Report

Client: Hall Environmental
Project: 0703134

Report Date: 03/30/07
Work Order: C07030533

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW9060									Batch: R60861
Sample ID: MBLK	Method Blank				Run: TOC2-C_070314A				03/14/07 14:34
Inorganic Carbon, Total (TIC)	ND	mg/L	0.5						
Sample ID: C07030533-004CMS1	Sample Matrix Spike				Run: TOC2-C_070314A				03/14/07 15:40
Inorganic Carbon, Total (TIC)	59.3	mg/L	1.0	93	85	115			
Sample ID: C07030533-004CMS1	Sample Matrix Spike				Run: TOC2-C_070314A				03/14/07 15:44
Inorganic Carbon, Total (TIC)	59.5	mg/L	1.0	93	85	115			
Sample ID: C07030533-004CMSD1	Sample Matrix Spike Duplicate				Run: TOC2-C_070314A				03/14/07 15:51
Inorganic Carbon, Total (TIC)	58.7	mg/L	1.0	90	85	115			
Sample ID: C07030533-004CMSD1	Sample Matrix Spike Duplicate				Run: TOC2-C_070314A				03/14/07 15:54
Inorganic Carbon, Total (TIC)	59.4	mg/L	1.0	93	85	115			
Sample ID: LCS2-C219-99-268	Laboratory Control Sample				Run: TOC2-C_070314A				03/14/07 16:02
Inorganic Carbon, Total (TIC)	30.7	mg/L	1.0	102	90	110			

Qualifiers:
RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP

Work Order: 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW9056A									
Sample ID: MB-12497		*MBLK*			Batch ID:	12497	Analysis Date:	3/13/2007 10:28:57 PM	
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-12497		*LCS*			Batch ID:	12497	Analysis Date:	3/13/2007 10:21:11 PM	
Chloride	15.88	mg/Kg	0.30	104	90	110			
Method: E300									
Sample ID: MBLK		*MBLK*			Batch ID:	R22794	Analysis Date:	3/12/2007 8:38:26 PM	
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Bromide	ND	mg/L	0.10						
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.10						
Sulfate	ND	mg/L	0.50						
Sample ID: MBLK		*MBLK*			Batch ID:	R22831	Analysis Date:	3/14/2007 12:24:34 PM	
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Bromide	ND	mg/L	0.10						
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.10						
Sulfate	ND	mg/L	0.50						
Sample ID: MBLK		*MBLK*			Batch ID:	R22904	Analysis Date:	3/20/2007 10:50:59 AM	
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Bromide	ND	mg/L	0.10						
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.10						
Sulfate	ND	mg/L	0.50						
Sample ID: LCS ST300-07001		*LCS*			Batch ID:	R22794	Analysis Date:	3/12/2007 9:55:50 PM	
Fluoride	0.4904	mg/L	0.10	98.1	90	110			
Chloride	5.118	mg/L	0.10	102	90	110			
Bromide	2.611	mg/L	0.10	104	90	110			
Nitrate (As N)+Nitrite (As N)	3.638	mg/L	0.10	104	90	110			
Sulfate	10.42	mg/L	0.50	104	90	110			
Sample ID: LCS ST300-07001		*LCS*			Batch ID:	R22831	Analysis Date:	3/14/2007 12:41:58 PM	
Fluoride	0.5356	mg/L	0.10	107	90	110			
Chloride	5.344	mg/L	0.10	107	90	110			
Bromide	2.626	mg/L	0.10	105	90	110			
Nitrate (As N)+Nitrite (As N)	3.684	mg/L	0.10	105	90	110			
Sulfate	10.75	mg/L	0.50	107	90	110			
Sample ID: LCS ST300-07001		*LCS*			Batch ID:	R22904	Analysis Date:	3/20/2007 11:08:23 AM	
Fluoride	0.5098	mg/L	0.10	102	90	110			
Chloride	5.259	mg/L	0.10	105	90	110			
Bromide	2.678	mg/L	0.10	107	90	110			
Nitrate (As N)+Nitrite (As N)	3.726	mg/L	0.10	106	90	110			
Sulfate	10.39	mg/L	0.50	104	90	110			

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1

75/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: E310.1									
Sample ID: MB		*MBLK*			Batch ID:	R22933	Analysis Date:		3/22/2007
Alkalinity, Total (As CaCO3)	ND	mg/L CaC	2.0						
Carbonate	ND	mg/L CaC	2.0						
Bicarbonate	ND	mg/L CaC	2.0						
Sample ID: LCS		*LCS*			Batch ID:	R22933	Analysis Date:		3/22/2007
Alkalinity, Total (As CaCO3)	80.00	mg/L CaC	2.0	100	80	120			
Method: E418.1									
Sample ID: MB-12561		*MBLK*			Batch ID:	12561	Analysis Date:		3/23/2007
Petroleum Hydrocarbons, TR	ND	mg/Kg	20						
Sample ID: LCS-12561		*LCS*			Batch ID:	12561	Analysis Date:		3/23/2007
Petroleum Hydrocarbons, TR	96.28	mg/Kg	20	96.3	82	114			
Sample ID: LCSD-12561		*LCSD*			Batch ID:	12561	Analysis Date:		3/23/2007
Petroleum Hydrocarbons, TR	101.1	mg/Kg	20	101	82	114	4.88	20	

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 2

76/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8081									
Sample ID: MB-12490		*MBLK*			**Batch ID:**	12490	**Analysis Date:**	3/23/2007 8:54:53 PM	
4,4'-DDD	ND	mg/Kg	0.0020						
4,4'-DDE	ND	mg/Kg	0.0020						
4,4'-DDT	ND	mg/Kg	0.0020						
Aldrin	ND	mg/Kg	0.0020						
alpha-BHC	ND	mg/Kg	0.0020						
beta-BHC	ND	mg/Kg	0.0020						
Chlordane	ND	mg/Kg	0.25						
delta-BHC	ND	mg/Kg	0.0020						
Dieldrin	ND	mg/Kg	0.0020						
Endosulfan I	ND	mg/Kg	0.0020						
Endosulfan II	ND	mg/Kg	0.0020						
Endosulfan sulfate	ND	mg/Kg	0.0020						
Endrin	ND	mg/Kg	0.0020						
Endrin aldehyde	ND	mg/Kg	0.0020						
gamma-BHC	ND	mg/Kg	0.0020						
Heptachlor	ND	mg/Kg	0.0020						
Heptachlor epoxide	ND	mg/Kg	0.0020						
Methoxychlor	ND	mg/Kg	0.0020						
Toxaphene	ND	mg/Kg	0.25						
Sample ID: MB-12532		*MBLK*			**Batch ID:**	12532	**Analysis Date:**	3/23/2007 10:42:48 PM	
4,4'-DDD	ND	mg/Kg	0.0020						
4,4'-DDE	ND	mg/Kg	0.0020						
4,4'-DDT	ND	mg/Kg	0.0020						
Aldrin	ND	mg/Kg	0.0020						
alpha-BHC	ND	mg/Kg	0.0020						
beta-BHC	ND	mg/Kg	0.0020						
Chlordane	ND	mg/Kg	0.25						
delta-BHC	ND	mg/Kg	0.0020						
Dieldrin	ND	mg/Kg	0.0020						
Endosulfan I	ND	mg/Kg	0.0020						
Endosulfan II	ND	mg/Kg	0.0020						
Endosulfan sulfate	ND	mg/Kg	0.0020						
Endrin	ND	mg/Kg	0.0020						
Endrin aldehyde	ND	mg/Kg	0.0020						
gamma-BHC	ND	mg/Kg	0.0020						
Heptachlor	ND	mg/Kg	0.0020						
Heptachlor epoxide	ND	mg/Kg	0.0020						
Methoxychlor	ND	mg/Kg	0.0020						
Toxaphene	ND	mg/Kg	0.25						
Sample ID: LCS-12490		*LCS*			**Batch ID:**	12490	**Analysis Date:**	3/23/2007 9:30:52 PM	
4,4'-DDD	0.01325	mg/Kg	0.0020	106	65	124			
4,4'-DDE	0.01300	mg/Kg	0.0020	104	68.2	120			
4,4'-DDT	0.01325	mg/Kg	0.0020	106	47.7	158			
Aldrin	0.01150	mg/Kg	0.0020	92.0	65.9	107			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 3

77 / 92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8081									
Sample ID: LCS-12490		*LCS*			**Batch ID:**	12490	**Analysis Date:**	3/23/2007 9:30:52 PM	
alpha-BHC	0.01075	mg/Kg	0.0020	86.0	56.4	103			
beta-BHC	0.01100	mg/Kg	0.0020	88.0	68.9	115			
delta-BHC	0.01200	mg/Kg	0.0020	96.0	61.7	113			
Dieldrin	0.01300	mg/Kg	0.0020	104	66.8	118			
Endosulfan I	0.01275	mg/Kg	0.0020	102	67.1	118			
Endosulfan II	0.01300	mg/Kg	0.0020	104	70.5	117			
Endosulfan sulfate	0.01325	mg/Kg	0.0020	106	70.2	121			
Endrin	0.01425	mg/Kg	0.0020	114	58.2	131			
Endrin aldehyde	0.01225	mg/Kg	0.0020	98.0	69.1	131			
gamma-BHC	0.01125	mg/Kg	0.0020	90.0	62.8	106			
Heptachlor	0.01125	mg/Kg	0.0020	90.0	62.8	110			
Heptachlor epoxide	0.01250	mg/Kg	0.0020	100	66.6	117			
Methoxychlor	0.01325	mg/Kg	0.0020	106	64.7	137			
Sample ID: LCS-12532		*LCS*			**Batch ID:**	12532	**Analysis Date:**	3/23/2007 11:18:46 PM	
4,4'-DDD	0.01200	mg/Kg	0.0020	96.0	65	124			
4,4'-DDE	0.01150	mg/Kg	0.0020	92.0	68.2	120			
4,4'-DDT	0.01225	mg/Kg	0.0020	98.0	47.7	158			
Aldrin	0.009000	mg/Kg	0.0020	72.0	65.9	107			
alpha-BHC	0.008000	mg/Kg	0.0020	64.0	56.4	103			
beta-BHC	0.009000	mg/Kg	0.0020	72.0	68.9	115			
delta-BHC	0.009750	mg/Kg	0.0020	78.0	61.7	113			
Dieldrin	0.01100	mg/Kg	0.0020	88.0	66.8	118			
Endosulfan I	0.01050	mg/Kg	0.0020	84.0	67.1	118			
Endosulfan II	0.01150	mg/Kg	0.0020	92.0	70.5	117			
Endosulfan sulfate	0.01200	mg/Kg	0.0020	96.0	70.2	121			
Endrin	0.01425	mg/Kg	0.0020	114	58.2	131			
Endrin aldehyde	0.01025	mg/Kg	0.0020	82.0	69.1	131			
gamma-BHC	0.008750	mg/Kg	0.0020	70.0	62.8	106			
Heptachlor	0.008750	mg/Kg	0.0020	70.0	62.8	110			
Heptachlor epoxide	0.01025	mg/Kg	0.0020	82.0	66.6	117			
Methoxychlor	0.01325	mg/Kg	0.0020	106	64.7	137			
Sample ID: LCSD-12490		*LCSD*			**Batch ID:**	12490	**Analysis Date:**	3/23/2007 10:08:49 PM	
4,4'-DDD	0.01400	mg/Kg	0.0020	112	65	124	5.50	20	
4,4'-DDE	0.01300	mg/Kg	0.0020	104	68.2	120	0	20	
4,4'-DDT	0.01425	mg/Kg	0.0020	114	47.7	158	7.27	20	
Aldrin	0.009750	mg/Kg	0.0020	78.0	65.9	107	16.5	20	
alpha-BHC	0.008250	mg/Kg	0.0020	66.0	56.4	103	26.3	20	R
beta-BHC	0.009750	mg/Kg	0.0020	78.0	68.9	115	12.0	20	
delta-BHC	0.01075	mg/Kg	0.0020	86.0	61.7	113	11.0	20	
Dieldrin	0.01300	mg/Kg	0.0020	104	66.8	118	0	20	
Endosulfan I	0.01225	mg/Kg	0.0020	98.0	67.1	118	4.00	20	
Endosulfan II	0.01400	mg/Kg	0.0020	112	70.5	117	7.41	20	
Endosulfan sulfate	0.01450	mg/Kg	0.0020	116	70.2	121	9.01	20	
Endrin	0.01550	mg/Kg	0.0020	124	58.2	131	8.40	20	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 4

78 / 92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8081									
Sample ID: LCSD-12490		*LCSD*			**Batch ID:**	12490	**Analysis Date:**	3/23/2007 10:06:49 PM	
Endrin aldehyde	0.01250	mg/Kg	0.0020	100	69.1	131	2.02	20	
gamma-BHC	0.009250	mg/Kg	0.0020	74.0	62.8	106	19.5	20	
Heptachlor	0.009250	mg/Kg	0.0020	74.0	62.8	110	19.5	20	
Heptachlor epoxide	0.01175	mg/Kg	0.0020	94.0	66.6	117	6.19	20	
Methoxychlor	0.01475	mg/Kg	0.0020	118	64.7	137	10.7	20	
Sample ID: LCSD-12532		*LCSD*			**Batch ID:**	12532	**Analysis Date:**	3/23/2007 11:54:41 PM	
4,4'-DDD	0.01325	mg/Kg	0.0020	106	65	124	9.90	20	
4,4'-DDE	0.01250	mg/Kg	0.0020	100	68.2	120	8.33	20	
4,4'-DDT	0.01350	mg/Kg	0.0020	108	47.7	158	9.71	20	
Aldrin	0.01000	mg/Kg	0.0020	80.0	65.9	107	10.5	20	
alpha-BHC	0.009000	mg/Kg	0.0020	72.0	56.4	103	11.8	20	
beta-BHC	0.01000	mg/Kg	0.0020	80.0	68.9	115	10.5	20	
delta-BHC	0.01075	mg/Kg	0.0020	86.0	61.7	113	9.76	20	
Dieldrin	0.01225	mg/Kg	0.0020	98.0	66.8	118	10.8	20	
Endosulfan I	0.01150	mg/Kg	0.0020	92.0	67.1	118	9.09	20	
Endosulfan II	0.01275	mg/Kg	0.0020	102	70.5	117	10.3	20	
Endosulfan sulfate	0.01400	mg/Kg	0.0020	112	70.2	121	15.4	20	
Endrin	0.01450	mg/Kg	0.0020	116	58.2	131	1.74	20	
Endrin aldehyde	0.01200	mg/Kg	0.0020	96.0	69.1	131	15.7	20	
gamma-BHC	0.009750	mg/Kg	0.0020	78.0	62.8	106	10.8	20	
Heptachlor	0.009750	mg/Kg	0.0020	78.0	62.8	110	10.8	20	
Heptachlor epoxide	0.01150	mg/Kg	0.0020	92.0	66.6	117	11.5	20	
Methoxychlor	0.01400	mg/Kg	0.0020	112	64.7	137	5.50	20	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 5

79/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8082									
Sample ID: MB-12491		*MBLK*			Batch ID:	12491	Analysis Date:	3/15/2007 7:19:57 AM	
Aroclor 1016	ND	mg/Kg	0.020						
Aroclor 1221	ND	mg/Kg	0.25						
Aroclor 1232	ND	mg/Kg	0.020						
Aroclor 1242	ND	mg/Kg	0.020						
Aroclor 1248	ND	mg/Kg	0.020						
Aroclor 1254	ND	mg/Kg	0.020						
Aroclor 1260	ND	mg/Kg	0.020						
Sample ID: MB-12531		*MBLK*			Batch ID:	12531	Analysis Date:	3/22/2007 7:43:07 PM	
Aroclor 1016	ND	mg/Kg	0.020						
Aroclor 1221	ND	mg/Kg	0.25						
Aroclor 1232	ND	mg/Kg	0.020						
Aroclor 1242	ND	mg/Kg	0.020						
Aroclor 1248	ND	mg/Kg	0.020						
Aroclor 1254	ND	mg/Kg	0.020						
Aroclor 1260	ND	mg/Kg	0.020						
Sample ID: LCS-12491		*LCS*			Batch ID:	12491	Analysis Date:	3/15/2007 8:03:58 AM	
Aroclor 1260	0.1538	mg/Kg	0.020	123	59.1	143			
Sample ID: LCS-12531		*LCS*			Batch ID:	12531	Analysis Date:	3/22/2007 8:27:14 PM	
Aroclor 1260	0.1252	mg/Kg	0.020	100	59.1	143			
Sample ID: LCSD-12491		*LCSD*			Batch ID:	12491	Analysis Date:	3/15/2007 8:49:12 AM	
Aroclor 1221	ND	mg/Kg	0.25						
Aroclor 1232	ND	mg/Kg	0.020						
Aroclor 1242	ND	mg/Kg	0.020						
Aroclor 1248	ND	mg/Kg	0.020						
Aroclor 1254	ND	mg/Kg	0.020						
Aroclor 1260	0.1466	mg/Kg	0.020	117	59.1	143			
Sample ID: LCSD-12531		*LCSD*			Batch ID:	12531	Analysis Date:	3/22/2007 9:12:27 PM	
Aroclor 1260	0.1279	mg/Kg	0.020	102	59.1	143	2.13	20	

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 6

80/92

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP

Work Order: 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8260B									
Sample ID: MB-12485		*MBLK*			**Batch ID:**	12485	**Analysis Date:**		3/14/2007
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050						
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050						
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050						
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050						
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050						
Naphthalene	ND	mg/Kg	0.10						
1-Methylnaphthalene	ND	mg/Kg	0.20						
2-Methylnaphthalene	ND	mg/Kg	0.20						
Acetone	ND	mg/Kg	0.75						
Bromobenzene	ND	mg/Kg	0.050						
Bromochloromethane	ND	mg/Kg	0.050						
Bromodichloromethane	ND	mg/Kg	0.050						
Bromoform	ND	mg/Kg	0.050						
Bromomethane	ND	mg/Kg	0.10						
2-Butanone	ND	mg/Kg	0.50						
Carbon disulfide	ND	mg/Kg	0.50						
Carbon tetrachloride	ND	mg/Kg	0.10						
Chlorobenzene	ND	mg/Kg	0.050						
Chloroethane	ND	mg/Kg	0.10						
Chloroform	ND	mg/Kg	0.050						
Chloromethane	ND	mg/Kg	0.050						
2-Chlorotoluene	ND	mg/Kg	0.050						
4-Chlorotoluene	ND	mg/Kg	0.050						
cis-1,2-DCE	ND	mg/Kg	0.050						
cis-1,3-Dichloropropene	ND	mg/Kg	0.050						
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10						
Dibromochloromethane	ND	mg/Kg	0.050						
Dibromomethane	ND	mg/Kg	0.10						
1,2-Dichlorobenzene	ND	mg/Kg	0.050						
1,3-Dichlorobenzene	ND	mg/Kg	0.050						
1,4-Dichlorobenzene	ND	mg/Kg	0.050						
Dichlorodifluoromethane	ND	mg/Kg	0.050						
1,1-Dichloroethane	ND	mg/Kg	0.10						
1,1-Dichloroethene	ND	mg/Kg	0.050						
1,2-Dichloropropane	ND	mg/Kg	0.050						
1,3-Dichloropropane	ND	mg/Kg	0.050						
2,2-Dichloropropane	ND	mg/Kg	0.10						
1,1-Dichloropropene	ND	mg/Kg	0.10						
Hexachlorobutadiene	ND	mg/Kg	0.10						
2-Hexanone	ND	mg/Kg	0.50						
Isopropylbenzene	ND	mg/Kg	0.050						

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike recovery outside accepted recovery limits

Page 7

81/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8260B									
Sample ID: MB-12485		*MBLK*			Batch ID:	12485	Analysis Date:		3/14/2007
4-Isopropyltoluene	ND	mg/Kg	0.050						
4-Methyl-2-pentanone	ND	mg/Kg	0.50						
Methylene chloride	ND	mg/Kg	0.15						
n-Butylbenzene	ND	mg/Kg	0.050						
n-Propylbenzene	ND	mg/Kg	0.050						
sec-Butylbenzene	ND	mg/Kg	0.050						
Styrene	ND	mg/Kg	0.050						
tert-Butylbenzene	ND	mg/Kg	0.050						
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050						
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050						
Tetrachloroethene (PCE)	ND	mg/Kg	0.050						
trans-1,2-DCE	ND	mg/Kg	0.050						
trans-1,3-Dichloropropene	ND	mg/Kg	0.050						
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10						
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050						
1,1,1-Trichloroethane	ND	mg/Kg	0.050						
1,1,2-Trichloroethane	ND	mg/Kg	0.050						
Trichloroethene (TCE)	ND	mg/Kg	0.050						
Trichlorofluoromethane	ND	mg/Kg	0.050						
1,2,3-Trichloropropane	ND	mg/Kg	0.10						
Vinyl chloride	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: LCS-12485		*LCS*			Batch ID:	12485	Analysis Date:		3/14/2007
Benzene	1.104	mg/Kg	0.050	110	74.6	118			
Toluene	1.025	mg/Kg	0.050	102	70.4	134			
Chlorobenzene	1.060	mg/Kg	0.050	106	83.3	111			
1,1-Dichloroethene	0.9574	mg/Kg	0.050	95.7	62.8	125			
Trichloroethene (TCE)	0.8036	mg/Kg	0.050	80.4	62.3	109			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 8

82 / 92

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP

Work Order: 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8260B									
Sample ID: 5mL rb		*MBLK*			**Batch ID:** R22901		**Analysis Date:**		3/20/2007
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromochloromethane	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 9

83/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8260B									
Sample ID: 5mL rb		*MBLK*			**Batch ID:**	R22901	**Analysis Date:**		3/20/2007
4-Isopropyltoluene	ND	µg/L	1.0						
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	1.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 100ng lcs		*LCS*			**Batch ID:**	R22901	**Analysis Date:**		3/20/2007
Benzene	20.64	µg/L	1.0	103	72.5	122			
Toluene	18.91	µg/L	1.0	94.5	73.3	112			
Chlorobenzene	18.85	µg/L	1.0	94.2	73.8	111			
1,1-Dichloroethene	22.40	µg/L	1.0	112	79.7	122			
Trichloroethene (TCE)	19.92	µg/L	1.0	99.6	69.5	114			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 10

84/92

Hall Environmental Analysis Laboratory, Inc. Date: *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8270C									
Sample ID: MB-12505		*MBLK*			Batch ID:	12505	Analysis Date:		3/22/2007
Acenaphthene	ND	mg/Kg	0.20						
Acenaphthylene	ND	mg/Kg	0.20						
Aniline	ND	mg/Kg	0.20						
Anthracene	ND	mg/Kg	0.20						
Azobenzene	ND	mg/Kg	0.20						
Benz(a)anthracene	ND	mg/Kg	0.25						
Benzo(a)pyrene	ND	mg/Kg	0.20						
Benzo(b)fluoranthene	ND	mg/Kg	0.20						
Benzo(g,h,i)perylene	ND	mg/Kg	0.30						
Benzo(k)fluoranthene	ND	mg/Kg	0.50						
Benzoic acid	ND	mg/Kg	0.50						
Benzyl alcohol	ND	mg/Kg	1.0						
Bis(2-chloroethoxy)methane	ND	mg/Kg	0.50						
Bis(2-chloroethyl)ether	ND	mg/Kg	0.25						
Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.50						
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.20						
4-Bromophenyl phenyl ether	ND	mg/Kg	0.25						
Butyl benzyl phthalate	ND	mg/Kg	0.20						
Carbazole	ND	mg/Kg	0.20						
4-Chloro-3-methylphenol	ND	mg/Kg	0.20						
4-Chloroaniline	ND	mg/Kg	0.20						
2-Chloronaphthalene	ND	mg/Kg	0.20						
2-Chlorophenol	ND	mg/Kg	0.20						
4-Chlorophenyl phenyl ether	ND	mg/Kg	0.20						
Chrysene	ND	mg/Kg	0.20						
Di-n-butyl phthalate	ND	mg/Kg	0.50						
Di-n-octyl phthalate	ND	mg/Kg	0.50						
Dibenz(a,h)anthracene	ND	mg/Kg	0.25						
Dibenzofuran	ND	mg/Kg	0.50						
1,2-Dichlorobenzene	ND	mg/Kg	0.20						
1,3-Dichlorobenzene	ND	mg/Kg	0.20						
1,4-Dichlorobenzene	ND	mg/Kg	0.20						
3,3'-Dichlorobenzidine	ND	mg/Kg	0.20						
Diethyl phthalate	ND	mg/Kg	0.20						
Dimethyl phthalate	ND	mg/Kg	0.20						
2,4-Dichlorophenol	ND	mg/Kg	0.20						
2,4-Dimethylphenol	ND	mg/Kg	0.20						
4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.50						
2,4-Dinitrophenol	ND	mg/Kg	0.50						
2,4-Dinitrotoluene	ND	mg/Kg	0.20						
2,6-Dinitrotoluene	ND	mg/Kg	0.20						
Fluoranthene	ND	mg/Kg	0.20						
Fluorene	ND	mg/Kg	0.20						
Hexachlorobenzene	ND	mg/Kg	0.20						

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 11

85/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8270C									
Sample ID: MB-12505		*MBLK*			**Batch ID:**	**12505**	**Analysis Date:**		**3/22/2007**
Hexachlorobutadiene	ND	mg/Kg	0.20						
Hexachlorocyclopentadiene	ND	mg/Kg	0.25						
Hexachloroethane	ND	mg/Kg	0.50						
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.20						
Isophorone	ND	mg/Kg	0.20						
2-Methylnaphthalene	ND	mg/Kg	0.20						
2-Methylphenol	ND	mg/Kg	0.20						
3+4-Methylphenol	ND	mg/Kg	0.20						
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20						
N-Nitrosodiphenylamine	ND	mg/Kg	0.20						
Naphthalene	ND	mg/Kg	0.20						
2-Nitroaniline	ND	mg/Kg	0.50						
3-Nitroaniline	ND	mg/Kg	0.50						
4-Nitroaniline	ND	mg/Kg	0.25						
Nitrobenzene	ND	mg/Kg	0.20						
2-Nitrophenol	ND	mg/Kg	0.20						
4-Nitrophenol	ND	mg/Kg	0.20						
Pentachlorophenol	ND	mg/Kg	0.50						
Phenanthrene	ND	mg/Kg	0.20						
Phenol	ND	mg/Kg	0.20						
Pyrene	ND	mg/Kg	0.20						
Pyridine	ND	mg/Kg	0.50						
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20						
2,4,5-Trichlorophenol	ND	mg/Kg	0.20						
2,4,6-Trichlorophenol	ND	mg/Kg	0.20						
Sample ID: LCS-12505		*LCS*			**Batch ID:**	**12505**	**Analysis Date:**		**3/22/2007**
Acenaphthene	1.338	mg/Kg	0.20	80.1	24	125			
4-Chloro-3-methylphenol	2.895	mg/Kg	0.20	86.9	14.6	154			
2-Chlorophenol	2.695	mg/Kg	0.20	80.9	13.3	149			
1,4-Dichlorobenzene	1.138	mg/Kg	0.20	68.0	23.6	118			
2,4-Dinitrotoluene	1.316	mg/Kg	0.20	78.6	28	136			
N-Nitrosodi-n-propylamine	1.285	mg/Kg	0.20	77.0	28	114			
4-Nitrophenol	2.075	mg/Kg	0.20	62.3	13.1	150			
Pentachlorophenol	2.831	mg/Kg	0.50	85.0	20.1	139			
Phenol	2.608	mg/Kg	0.20	78.3	17.3	141			
Pyrene	1.413	mg/Kg	0.20	84.6	29	131			
1,2,4-Trichlorobenzene	1.150	mg/Kg	0.20	68.9	17.9	126			
Sample ID: LCSD-12505		*LCSD*			**Batch ID:**	**12505**	**Analysis Date:**		**3/22/2007**
Acenaphthene	1.186	mg/Kg	0.20	60.8	24	125	13.7	25	
4-Chloro-3-methylphenol	2.643	mg/Kg	0.20	79.4	14.6	154	9.08	25	
2-Chlorophenol	2.359	mg/Kg	0.20	70.8	13.3	149	13.3	25	
1,4-Dichlorobenzene	0.9643	mg/Kg	0.20	58.9	23.6	118	14.3	25	
2,4-Dinitrotoluene	1.256	mg/Kg	0.20	75.2	28	136	4.66	25	
N-Nitrosodi-n-propylamine	1.085	mg/Kg	0.20	65.5	28	114	16.0	25	

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike recovery outside accepted recovery limits

Page 12

86/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8270C									
Sample ID: LCSD-12505		*LCSD*			**Batch ID: 12505**		**Analysis Date:**		**3/22/2007**
4-Nitrophenol	2.034	mg/Kg	0.20	61.1	13.1	150	1.98	25	
Pentachlorophenol	2.573	mg/Kg	0.50	77.3	20.1	139	9.57	25	
Phenol	2.304	mg/Kg	0.20	69.2	17.3	141	12.4	25	
Pyrene	1.286	mg/Kg	0.20	77.0	29	131	9.39	25	
1,2,4-Trichlorobenzene	1.077	mg/Kg	0.20	64.5	17.9	126	6.62	25	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 13

87 / 92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8310									
Sample ID: MB-12557		*MBLK*			**Batch ID: 12557**		**Analysis Date:**	**3/26/2007 1:20:17 PM**	
Naphthalene	ND	mg/Kg	0.25						
1-Methylnaphthalene	ND	mg/Kg	0.25						
2-Methylnaphthalene	ND	mg/Kg	0.25						
Acenaphthylene	ND	mg/Kg	0.25						
Acenaphthene	ND	mg/Kg	0.25						
Fluorene	ND	mg/Kg	0.030						
Phenanthrene	ND	mg/Kg	0.015						
Anthracene	ND	mg/Kg	0.015						
Fluoranthene	ND	mg/Kg	0.020						
Pyrene	ND	mg/Kg	0.025						
Benz(a)anthracene	ND	mg/Kg	0.0020						
Chrysene	ND	mg/Kg	0.011						
Benzo(b)fluoranthene	ND	mg/Kg	0.0040						
Benzo(k)fluoranthene	ND	mg/Kg	0.0010						
Benzo(a)pyrene	ND	mg/Kg	0.0010						
Dibenz(a,h)anthracene	ND	mg/Kg	0.0030						
Benzo(g,h,i)perylene	ND	mg/Kg	0.0030						
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.0040						
Sample ID: LCS-12557		*LCS*			**Batch ID: 12557**		**Analysis Date:**	**3/26/2007 2:06:16 PM**	
Naphthalene	0.5320	mg/Kg	0.25	53.2	30.5	98.5			
1-Methylnaphthalene	0.5282	mg/Kg	0.25	52.8	36	95.4			
2-Methylnaphthalene	0.5348	mg/Kg	0.25	53.5	35.4	95.3			
Acenaphthylene	0.6820	mg/Kg	0.25	68.2	45.2	99.4			
Acenaphthene	0.5772	mg/Kg	0.25	57.7	44.3	97.4			
Fluorene	0.05975	mg/Kg	0.030	59.8	50.4	99.9			
Phenanthrene	0.03125	mg/Kg	0.015	62.1	43.1	121			
Anthracene	0.03100	mg/Kg	0.015	61.6	57.6	105			
Fluoranthene	0.07000	mg/Kg	0.020	69.8	69	101			
Pyrene	0.07000	mg/Kg	0.025	70.0	65.1	110			
Benz(a)anthracene	0.008000	mg/Kg	0.0020	80.0	62	115			
Chrysene	0.03725	mg/Kg	0.011	74.1	66.6	110			
Benzo(b)fluoranthene	0.009500	mg/Kg	0.0040	76.0	70.9	112			
Benzo(k)fluoranthene	0.004750	mg/Kg	0.0010	76.0	68.1	110			
Benzo(a)pyrene	0.005250	mg/Kg	0.0010	83.6	56.7	125			
Dibenz(a,h)anthracene	0.01000	mg/Kg	0.0030	80.0	69.7	112			
Benzo(g,h,i)perylene	0.01000	mg/Kg	0.0030	80.0	67	117			
Indeno(1,2,3-cd)pyrene	0.02318	mg/Kg	0.0040	92.3	67.9	106			
Sample ID: LCSD-12557		*LCSD*			**Batch ID: 12557**		**Analysis Date:**	**3/26/2007 12:55:12 PM**	
Naphthalene	0.5108	mg/Kg	0.25	51.1	30.5	98.5	4.08	20	
1-Methylnaphthalene	0.5255	mg/Kg	0.25	52.6	36	95.4	0.522	20	
2-Methylnaphthalene	0.5285	mg/Kg	0.25	52.8	35.4	95.3	1.18	20	
Acenaphthylene	0.6588	mg/Kg	0.25	65.9	45.2	99.4	3.48	20	
Acenaphthene	0.6130	mg/Kg	0.25	61.3	44.3	97.4	6.01	20	
Fluorene	0.06500	mg/Kg	0.030	65.0	50.4	99.9	8.42	20	

Qualifiers:

B	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 14

88/92

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP

Work Order: 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8310									
Sample ID: LCSD-12557		*LCSD*			Batch ID:	12557	Analysis Date:	3/28/2007 12:55:12 PM	
Phenanthrene	0.03400	mg/Kg	0.015	67.6	43.1	121	8.43	20	
Anthracene	0.03275	mg/Kg	0.015	65.1	57.6	105	5.49	20	
Fluoranthene	0.07200	mg/Kg	0.020	71.8	69	101	2.82	20	
Pyrene	0.07550	mg/Kg	0.025	75.5	65.1	110	7.56	20	
Benz(a)anthracene	0.008250	mg/Kg	0.0020	82.5	62	115	3.08	20	
Chrysene	0.03850	mg/Kg	0.011	76.5	66.6	110	3.30	20	
Benzo(b)fluoranthene	0.009750	mg/Kg	0.0040	78.0	70.9	112	2.60	20	
Benzo(k)fluoranthene	0.005000	mg/Kg	0.0010	80.0	68.1	110	5.13	20	
Benzo(a)pyrene	0.005000	mg/Kg	0.0010	79.6	56.7	125	4.88	20	
Dibenz(a,h)anthracene	0.01000	mg/Kg	0.0030	80.0	69.7	112	0	20	
Benzo(g,h,i)perylene	0.01100	mg/Kg	0.0030	88.0	67	117	9.52	20	
Indeno(1,2,3-cd)pyrene	0.02170	mg/Kg	0.0040	86.5	67.9	106	6.57	20	
Method: SW7471									
Sample ID: MB-12553		*MBLK*			Batch ID:	12553	Analysis Date:	3/21/2007	
Mercury	ND	mg/Kg	0.033						
Sample ID: LCS-12553		*LCS*			Batch ID:	12553	Analysis Date:	3/21/2007	
Mercury	0.1600	mg/Kg	0.033	96.0	80	120			
Method: SW7470									
Sample ID: MB-12574		*MBLK*			Batch ID:	12574	Analysis Date:	3/24/2007	
Mercury	ND	mg/L	0.00020						
Sample ID: LCS-12574		*LCS*			Batch ID:	12574	Analysis Date:	3/24/2007	
Mercury	0.004612	mg/L	0.00020	90.0	80	120			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

89/92

Page 15

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW6010A									
Sample ID: MB-12550		*MBLK*			**Batch ID:**	12550	**Analysis Date:**	3/27/2007 9:11:11 AM	
Arsenic	ND	mg/Kg	2.5						
Barium	ND	mg/Kg	0.10						
Cadmium	ND	mg/Kg	0.10						
Chromium	ND	mg/Kg	0.30						
Lead	ND	mg/Kg	0.25						
Selenium	3.087	mg/Kg	2.5						
Silver	ND	mg/Kg	0.25						
Thallium	ND	mg/Kg	2.5						
Uranium	ND	mg/Kg	5.0						
Sample ID: LCS-12550		*LCS*			**Batch ID:**	12550	**Analysis Date:**	3/27/2007 9:12:44 AM	
Arsenic	25.60	mg/Kg	2.5	102	80	120			
Barium	25.42	mg/Kg	0.10	102	80	120			
Cadmium	26.43	mg/Kg	0.10	106	80	120			
Chromium	26.52	mg/Kg	0.30	106	80	120			
Lead	26.11	mg/Kg	0.25	104	80	120			
Selenium	25.59	mg/Kg	2.5	90.0	80	120			B
Silver	26.33	mg/Kg	0.25	105	80	120			
Thallium	27.01	mg/Kg	2.5	108	80	120			
Uranium	25.27	mg/Kg	5.0	101	80	120			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Page 16

90/92

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP

Work Order: 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW6010A									
Sample ID: MB-12511		*MBLK*			Batch ID: 12511		Analysis Date: 3/16/2007 1:41:18 PM		
Barium	ND	mg/L	0.020						
Beryllium	ND	mg/L	0.0030						
Cadmium	ND	mg/L	0.0020						
Chromium	ND	mg/L	0.0060						
Cobalt	ND	mg/L	0.0060						
Copper	ND	mg/L	0.0060						
Lead	ND	mg/L	0.0050						
Manganese	ND	mg/L	0.0020						
Molybdenum	ND	mg/L	0.0080						
Nickel	ND	mg/L	0.010						
Potassium	ND	mg/L	1.0						
Vanadium	ND	mg/L	0.050						
Zinc	ND	mg/L	0.050						
Sample ID: MB-12511		*MBLK*			Batch ID: 12511		Analysis Date: 3/20/2007 10:49:58 AM		
Aluminum	ND	mg/L	0.020						
Calcium	ND	mg/L	1.0						
Iron	ND	mg/L	0.050						
Magnesium	ND	mg/L	1.0						
Silver	ND	mg/L	0.0050						
Sodium	ND	mg/L	1.0						
Sample ID: MB-12511		*MBLK*			Batch ID: 12511		Analysis Date: 3/16/2007 1:41:18 PM		
Boron	ND	mg/L	0.040						
Sample ID: LCS-12511		*LCS*			Batch ID: 12511		Analysis Date: 3/16/2007 1:44:21 PM		
Barium	0.4985	mg/L	0.020	99.7	80	120			
Beryllium	0.5305	mg/L	0.0030	106	80	120			
Cadmium	0.4965	mg/L	0.0020	99.7	80	120			
Chromium	0.5073	mg/L	0.0060	101	80	120			
Cobalt	0.4819	mg/L	0.0060	96.4	80	120			
Copper	0.5230	mg/L	0.0060	104	80	120			
Lead	0.4965	mg/L	0.0050	99.3	80	120			
Manganese	0.4972	mg/L	0.0020	99.4	80	120			
Molybdenum	0.5325	mg/L	0.0080	106	80	120			
Nickel	0.4820	mg/L	0.010	96.4	80	120			
Potassium	52.11	mg/L	1.0	104	80	120			
Vanadium	0.5349	mg/L	0.050	107	80	120			
Zinc	0.4904	mg/L	0.050	97.5	80	120			
Sample ID: LCS-12511		*LCS*			Batch ID: 12511		Analysis Date: 3/20/2007 10:52:41 AM		
Aluminum	0.5318	mg/L	0.020	106	80	120			
Calcium	51.16	mg/L	1.0	102	80	120			
Iron	0.5455	mg/L	0.050	109	80	120			
Magnesium	51.65	mg/L	1.0	103	80	120			
Silver	0.5355	mg/L	0.0050	107	80	120			
Sodium	51.28	mg/L	1.0	103	80	120			

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 17

91/92

Hall Environmental Analysis Laboratory, Inc. **Date:** *10-Apr-07*

QA/QC SUMMARY REPORT

Client: Gordon Environmental, Inc.
Project: GNEP **Work Order:** 0703134

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW6010A									
Sample ID: LCS-12511		*LCS*			**Batch ID:**	**12511**	**Analysis Date:**		3/16/2007 1:44:21 PM
Boron	0.5259	mg/L	0.040	105	80	120			
Method: E350.2									
Sample ID: MBLK		*MBLK*			**Batch ID:**	**R22976**	**Analysis Date:**		3/26/2007
Ammonia	ND	mg/L	0.50						
Sample ID: LCS		*LCS*			**Batch ID:**	**R22976**	**Analysis Date:**		3/26/2007
Ammonia	9.940	mg/L	0.50	99.4	80	120			
Method: E150.1									
Sample ID: 0703134-03BDUP		*DUP*			**Batch ID:**	**R22838**	**Analysis Date:**		3/15/2007
pH	7.060	pH units	0.010						
Sample ID: 0703181-03CDUP		*DUP*			**Batch ID:**	**R22838**	**Analysis Date:**		3/15/2007
pH	7.470	pH units	0.010						
Method: E160.1									
Sample ID: MB-12507		*MBLK*			**Batch ID:**	**12507**	**Analysis Date:**		3/14/2007
Total Dissolved Solids	ND	mg/L	20						
Sample ID: MB-12525		*MBLK*			**Batch ID:**	**12525**	**Analysis Date:**		3/16/2007
Total Dissolved Solids	ND	mg/L	20						
Sample ID: LCS-12507		*LCS*			**Batch ID:**	**12507**	**Analysis Date:**		3/14/2007
Total Dissolved Solids	1001	mg/L	20	100	80	120			
Sample ID: LCS-12525		*LCS*			**Batch ID:**	**12525**	**Analysis Date:**		3/16/2007
Total Dissolved Solids	988.0	mg/L	20	98.8	80	120			
Method: E351.3									
Sample ID: MB-12563		*MBLK*			**Batch ID:**	**12563**	**Analysis Date:**		3/23/2007
Nitrogen, Kjeldahl, Total	ND	mg/L	1.0						
Sample ID: LCS-12563		*LCS*			**Batch ID:**	**12563**	**Analysis Date:**		3/23/2007
Nitrogen, Kjeldahl, Total	9.880	mg/L	1.0	98.8	80	120			
Method: E160.2									
Sample ID: MB		*MBLK*			**Batch ID:**	**R22864**	**Analysis Date:**		3/16/2007
Suspended Solids	ND	mg/L	10						
Sample ID: 0703134-04 DUP		*DUP*			**Batch ID:**	**R22864**	**Analysis Date:**		3/16/2007
Suspended Solids	261.0	mg/L	10				4.49	15	

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 18

92/92

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std ☐ Level 4 ☐ Other:

Client: Gordon Environmental

Address: 213 S. Camino del Pueblo, Bernalillo, NM 87004

Phone #: 867-6990

Fax #: -6991

Project Name: GNEP

Project #: 410.01.01

Project Manager: Mike Crepeau

Sampler: S Fretz / M Hermann

Sample Temperature: 6°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative	HEAL No.
				1-H2SO4 / HCl	HgCl2 / HNO3 / None / NaOH	07 03134
3/10/07	1240	AQ	Spring #1	1 / 6	1 / 3 / 2 / 1	-1
AT 3/10/07	1320	AQ	Spring #2	1 / 6	+ / 3 / 2 / +	
3/10/07	1340	AQ	LG West	1 / 6	1 / 3 / 2 / 1	-2
3/10/07	1500	AQ	Gatuna	1 / 6	1 / 3 / 2 / 1	-3
AT 3/10/07	1600	AQ	S. Drainage	1 / 6	+ / 3 / 2 / +	
3/10/07	1710	AQ	P-2	1 / 6	1 / 3 / 2 / 1	-4
			Trip Blank			-11

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Attached List				Air Bubbles or Headspace (Y or N)
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
3/12/07	8:28		3/12/07 0828
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: All samples except P-2 are surface water. Daylight savings makes 3/10 1240 48 hrs from 3/12 1340.

Page 94

Eddy Lea Siting Study
Contract No: DE-FG07-07ID14799

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std ☐ Level 4 ☐
Other:

Client: Gordon Environmental
Address: 213 S. Camino del Pueblo
Bernalillo, 87004
Phone #: 867-6990
Fax #: -6991

Project Name: GNEP
Project #: 410.01.01
Project Manager: Mike Crepeau
Sampler: SFretz / MHermann
Sample Temperature: 6°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl2	Preservative HNO3	Preservative	HEAL No. 0703134
3/10/07	8:37	Soil	S-1	3x8oz				-5
3/10/07	8:50		S-2					-6
3/10/07	9:06		S-3					-7
3/10/07	9:26		S-4					-8
3/10/07	10:15		S-5					-9
3/10/07	11:20		S-6					-10
~~3/9/07~~	~~10:30~~	~~Soil~~	~~P-1~~					
3/9/07	1030		P-1					-12

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2, PO4, SO4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Attached List				Air Bubbles or Headspace (Y or N)
												X				
												X				
												X				
												X				
												X				
												X				
												~~X~~	~~X~~			
												X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
3/12/07	8:32	Sam Fretz		3/12/07 0832
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: Unpreserved

Appendix 2J Social and Demographic Information

APPENDIX 2J

Appendix 2J is a compilation of reports prepared by the Bureau for Business and Economic Research which is affiliated with the University of New Mexico. Relevant portions of these reports are incorporated in the DSR. This appendix provides additional detail on the following topics:

- Part 1 Population and Demographics
- Part 2A Employment and Income
- Part 2B Metropolitan Statistical Areas In The Greater Region Surrounding the ELEA Proposed Site For GNEP
- Part 3 Public Services
- Part 4 Local Government Funds and Expenditures
- Part 5 Transportation Infrastructure

Part 1

Population and Demographics

Demographic and Socio-Economic Characteristics of Lea-Eddy Energy Project Study Area

Adelamar N. Alcantara, Ph.D.

Xiaomin Ruan

University of New Mexico

Bureau of Business and Economic Research

April 2007

Under contract with Gordon Environmental, Inc.

Demographic and Socio-Economic Profile of Lea-Eddy Energy Site

This report is produced under contract with Gordon Environmental, Inc. It presents the demographic and socio-economic characteristics of the Lea-Eddy Energy study area in the eastern plains of New Mexico. Data that are used in the analysis were taken from a variety of sources. Demographic and socio-economic data were primarily extracted from the 1990 and 2000 Decennial Censuses (http://factfinder.census.gov/home/saff/main.html) . Population counts by age, sex, and race and housing counts were from Summary Files 1 and 2. Migration and socio-economic numbers were processed from Summary File 3. School enrollment figures were downloaded from the websites of the National Center for Education Statistics (http://nces.ed.gov/ipedspas/index.asp) . Vital statistics numbers were processed from records provided by the New Mexico Department of Health Vital Statistics Records. The New Mexico Construction and Industries Division was the source of new residential construction data for most of the areas covered in the study area. The City of Hobbs as a special permitting place issued permits for its jurisdiction.

Study Area Geography and Population

The study area covers a 50.5 miles radius from the site, designated by a red dot on Map 1. The southeast corner of Chaves County, Census Tracts 12 to 14 that includes Lake Arthur Town, is the only portion of Chaves County that is included in the study area. A small part of Eddy County as well as Lea County is outside the circled area. However, because of the way Census data are tabulated, all Census Tracts touched by the boundary have to be included in the study area. Socio-economic characteristics and some housing data are tabulated only at the Census Tract level. The Census Tract boundaries (in blue outline) are drawn in Map 1 and the numbers shown in the map designate the Census Tracts in each county. Some Texas counties are also in the circle but the population centers are well outside the defined 50.5 area that no information is presented for these places.

Map 1
Study Area Definition

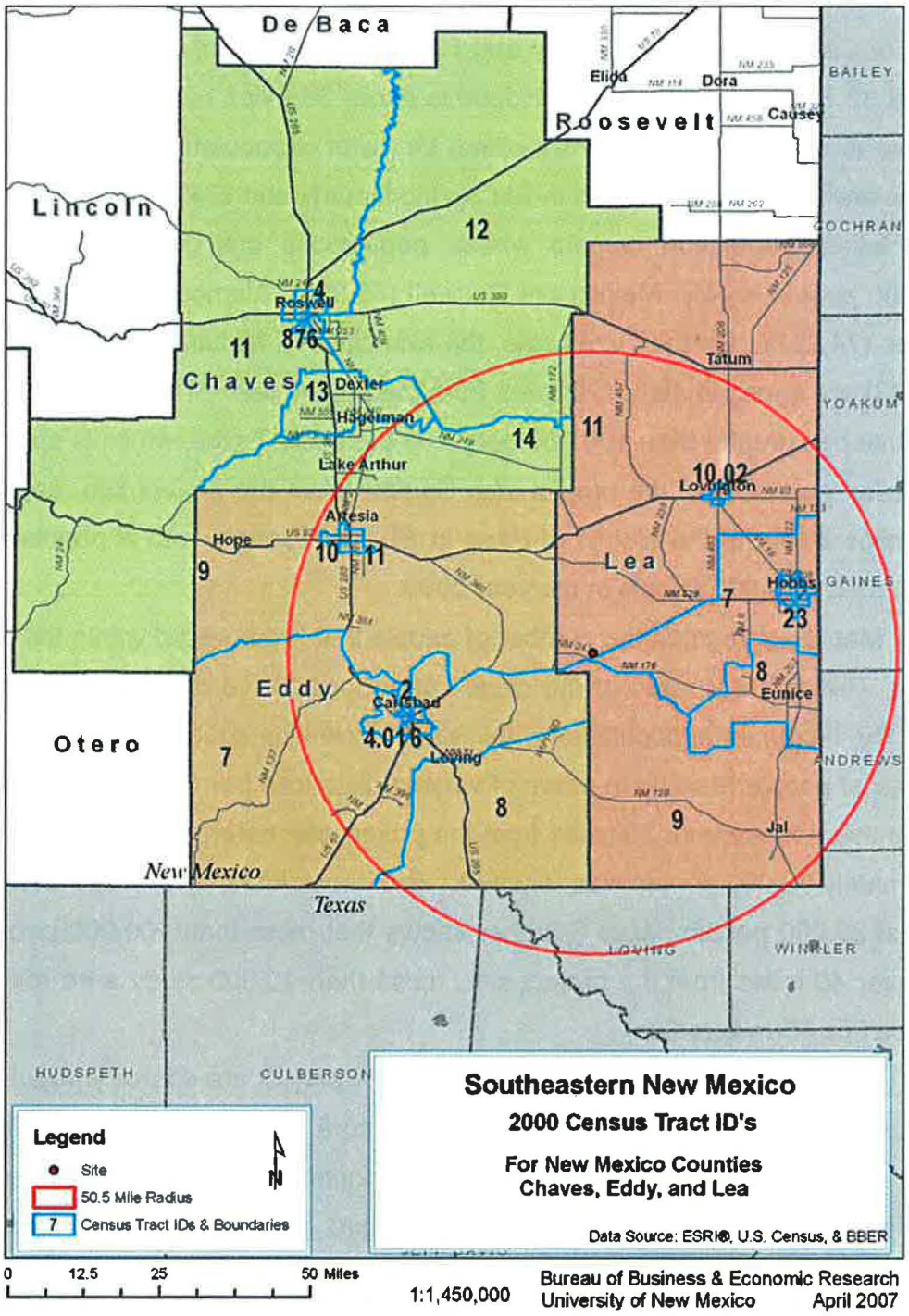


Table 1 shows the major urban areas that are within a certain distance from the site. Maps 2 and 3 illustrate the relative location of these major urban metropolitan areas to the site of the Lea-Eddy Energy Alliance Project. Closest to the site are the cities of Carlsbad in Eddy County and Hobbs in Lea County. Carlsbad is approximately 33 miles southwest while Hobbs is about 38 miles northeast of the site. On the Texas side, the closest small cities, i.e., with a population of less than 30,000 people are the cities of Howard in Big Spring County and El Paso in Socorro County. The closest population centers whose populations are over 30,000 but below 100,000 people in New Mexico are Roswell (45,293), Alamogordo (35,582) and Las Cruces (74,267). On the Texas side, the twin cities of Midland (94,996) and Odessa (90,943) are approximately 120 miles from the project site. The closest metropolitan area that has greater than 100,000 people is Lubbock, Texas, which is approximately 150 miles northeast of the project site. Southwest of the project site, approximately 200 miles away, is the city of El Paso in El Paso County with a population of approximately 570,000 people in the year 2000.

Map 3 aggregates the number of people that are covered within the 50.5 miles radius. The different sizes of the circle correspond to the distance from the project site. The incremental population within each circle was aggregated to show the total number of people residing in areas of varying distances from the project site. Map 3 shows that it took about 30 miles from the project site before a population total of approximately 20,000 people was reached. But it took just a few more miles for an additional 30,000 people. Map 3 further shows that more than 100,000 people reside just over 40 miles from the project site. Less than 10,000 study area residents are outside this 40-mile radius.

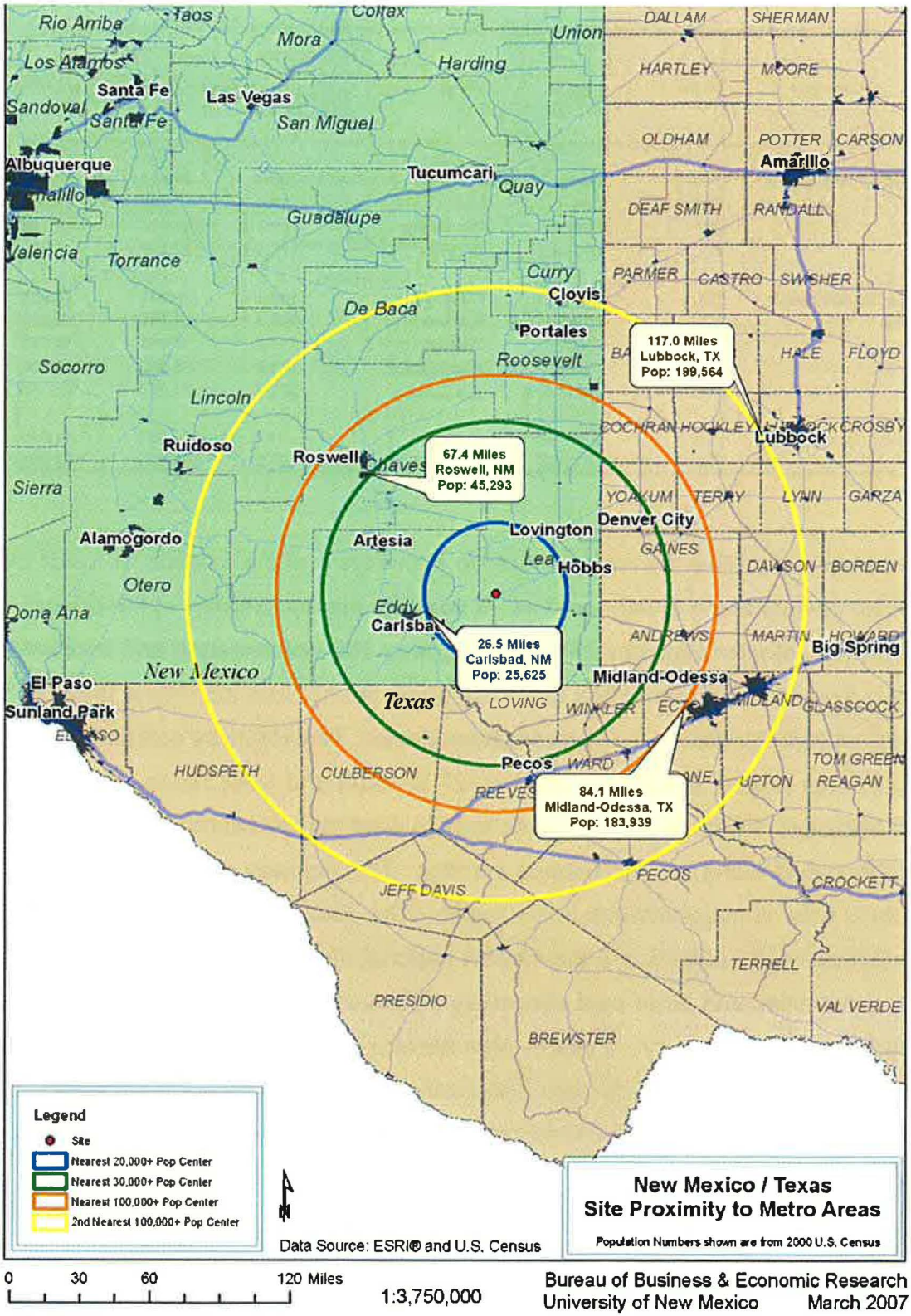
The areas within the 30-mile radius of the project are sparsely populated. The cities and urban areas in the study area are more than 30 miles away. In fact, the major population hubs in the study area are concentrated in the stretch between the 30-mile and 40-mile radius indicated by the third circle (red) and the second circle (blue) from the 50.5 mile boundary. Altogether, close to 115,000 people reside in the study area.

Table 1
Cities of Varying Population Sizes and Their Distance to Study Site
(Source: Census 2000 Summary File 1)

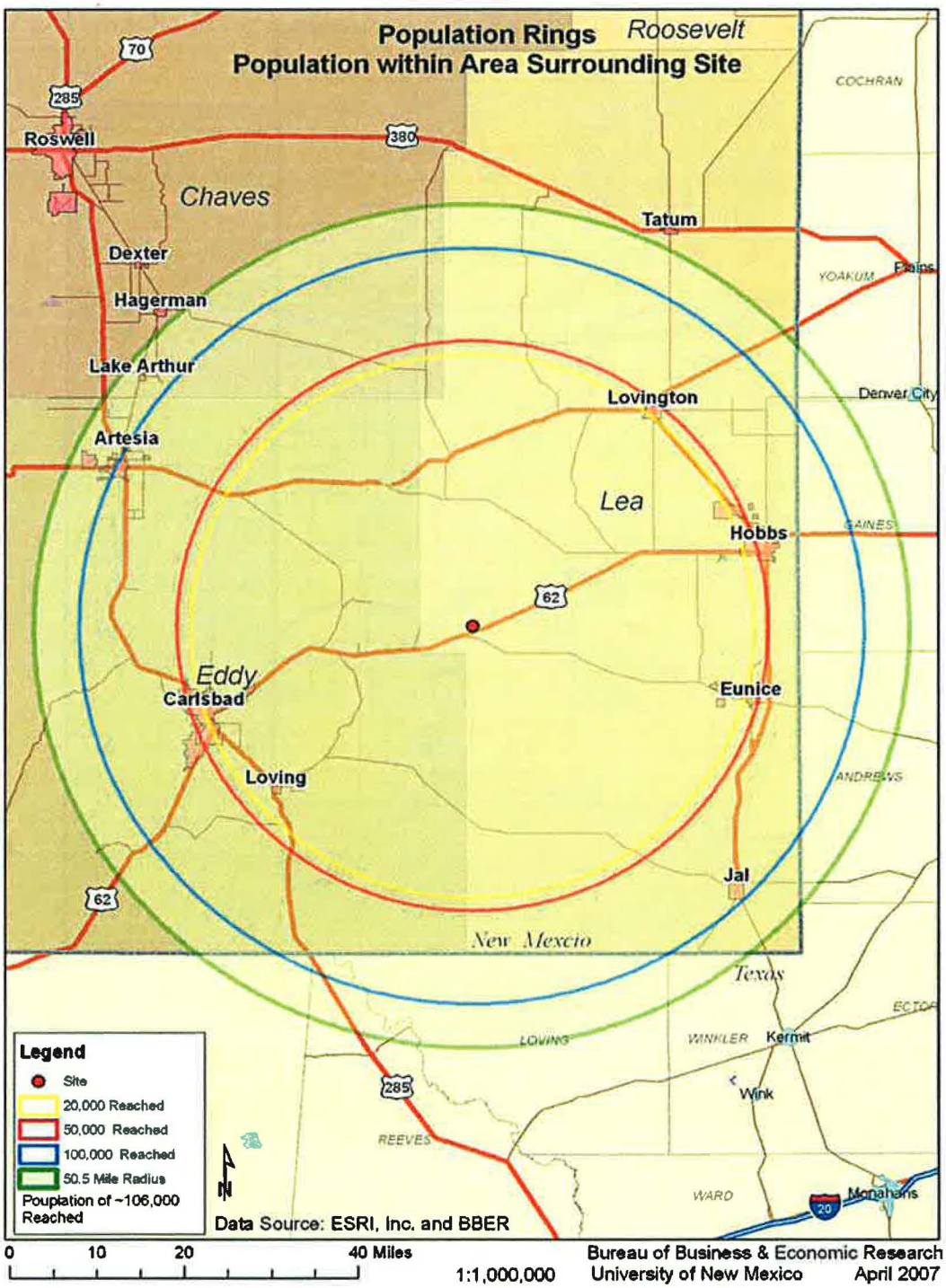
Population	State	County	Place	Distance from the Center (miles) of Study Area	Population	Housing Units
At least 20,000 people	NM	Eddy	Carlsbad	33.2	25,625	11,421
	NM	Lea	Hobbs	37.8	28,657	11,968
	TX	Howard	Big Spring	136.4	25,233	8,155
	TX	El Paso	Socorro	193.6	27,152	6,756
At least 30,000 people	TX	Ector	Odessa	109.1	90,943	37,966
nearest	NM	Chaves	Roswell	109.4	45,293	19,327
	TX	Midland	Midland	117.2	94,996	39,855
	NM	Otero	Alamogorda	179.4	35,582	13,704
	NM	Dona Ana	Las Cruces	241.5	74,267	29,184
At least 100,000 people	TX	Lubbock	Lubbock	147	199,564	84,066
	TX	El Paso	El Paso	197.2	563,662	182,063

Map 4 identifies the major interstate highways and the location of major metropolitan centers along these corridors. It points to the accessibility of the project site through New Mexico Highway 285. NM Highway 285 was widened and improved in the last decade to accommodate the traffic going to and from the Waste Isolation Pilot Project (WIPP) located in Carlsbad, New Mexico. This Highway connects the Lea-Eddy Energy project site to I10, I20 and I27 in south and west Texas. These interstate highways link up to I40 that goes east to west across central New Mexico and to I25 that runs along the Rio Grande corridor. This highway network also connects the study area to major airports in the region. The Texas metropolitan areas of Midland-Odessa and Lubbock are the closest regional airports to the study area. Likewise, universities and other post secondary institutions are located in or within a few hours from the study area. Eastern New Mexico University has campuses in both Portales and Roswell. New Mexico State University offers courses in Carlsbad. The College of the Southwest, New Mexico Military Institute, and New Mexico Junior College are located also in the region.

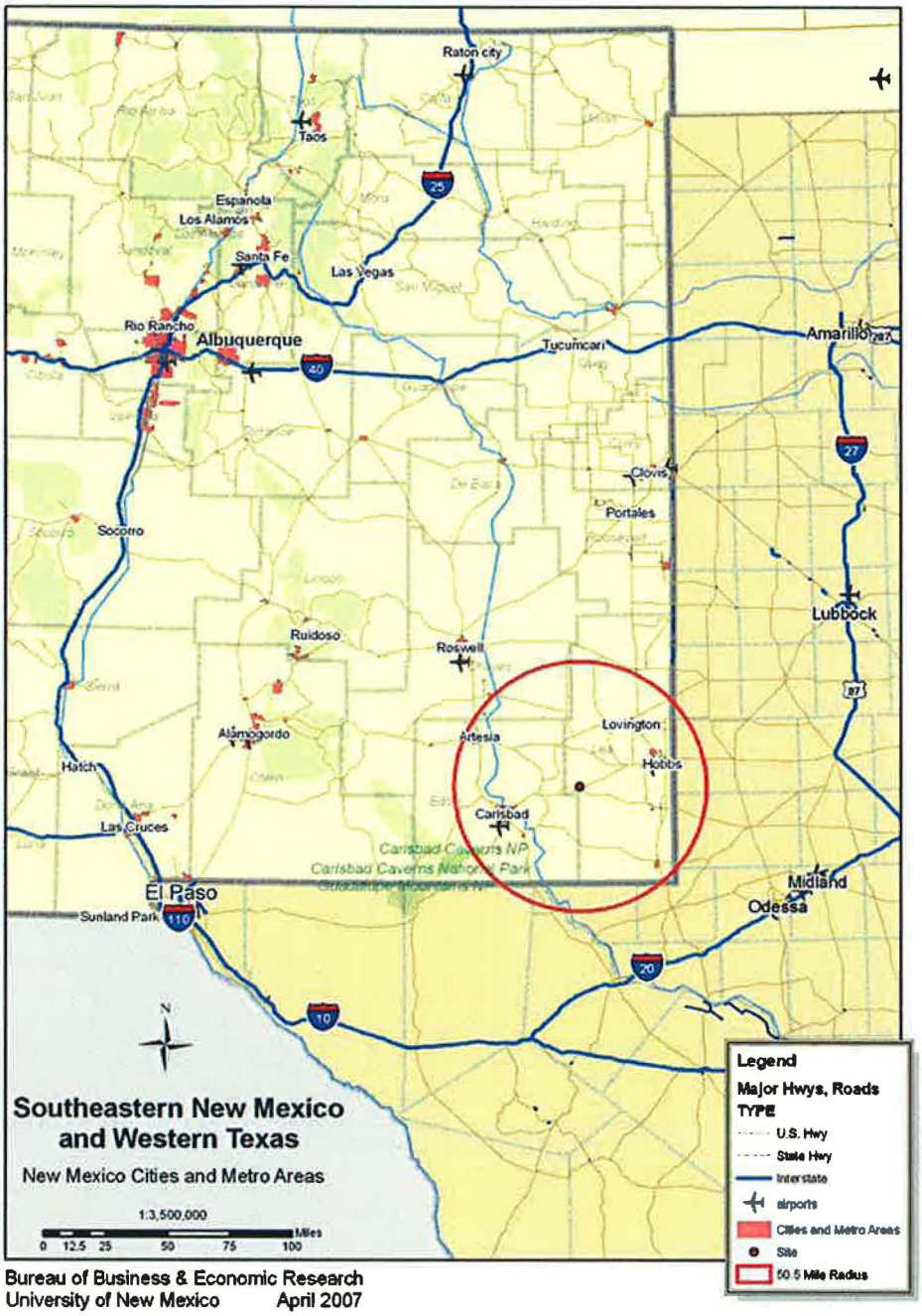
Map 2
Closest Urban Areas to Site With Population of at Least 20,000
(Source: Census 2000 Population Summary File 1)



Map 3
Total Population Within the 50.5 Mile Radius
(Source: Census 2000 Summary File 1)



Map 4
Metropolitan Areas Closest to Site
(Source: Census 2000 Summary File 1)



Bureau of Business & Economic Research
University of New Mexico April 2007

Population Characteristics

Table 2 presents the Census 2000 population counts of the study area. Detailed by Census Tract, Table 2 indicates where and how the approximately 114,000 people are distributed throughout the study area. Lea County had approximately 56,000 or 49% of the total study area population. Eddy County had approximately 52,000 or 45% of the population. The rest lived in the Lake Arthur area of Chaves County. Table 3 indicates that 112,000 or 89% of the study area residents lived in urban areas. Hobbs (35.9%) in Lea County had the biggest share of the population followed by Carlsbad (27.5%) in Eddy County. Together these two urban areas comprised over 60% of the study area population. The smallest urban area was Loving with a population of just over 2,000 people; Eunice had a population just below 2,900 people; and Tatum had close to 4,000 people. Map 5 shows the location of these cities relative to the project site.

Overall population growth in the area was fairly low. The area's compounded annual average growth rate during the decade of the 1990 was estimated at five-tenths of a percent. From 1990 to 2000, the study area population increased by almost four percent or approximately 4,200 people. Most of the growth was in Eddy County where a total of approximately 3,100 people were added during the period. The Lake Arthur area contributed about 1,500 people to the study area population growth. In contrast, Lea County registered a negative growth and lost about 250 people during the period.

Table 2 specifies the Census Tracts that gained population as well as those that suffered a loss during the 1990s. Between 1990 and 2000, the biggest gainers among the Census Tracts, in descending order, are the following: Census Tract 13 in Chaves County, increased by 38%; Eddy County Census Tract 9, 33%; Eddy County Census Tract 7, 32%; Lea County Census Tract 7, 25%. Chaves County Census Tracts 14 (18.3%) and Census Tract 13 (17.9%) make up the top six fastest growing areas in the study area. These fast growing areas are mainly in the areas around the incorporated places or cities. The cities themselves are growing very slowly or as in case of Hobbs (Census Tracts 1 to 6), lost population between 1990 and 2000. Census Tract 7, which is the area

Table 2
Population Counts, Annual Average Growth Rate, Percent Change From 1990 to 2000, by Census Tract
(Source: Census 1990 and Census 2000)

County/Census Tract	Total Population		Growth Rate		Hispanic		Growth Rate	
	Census 1990	Census 2000	Average Annual Growth Rate	Percent Change From 1990 to 2000	Census 1990	Census 2000	Average Annual Growth Rate	Percent Change From 1990 to 2000
Chaves County	**57,849**	**61,382**	**0.59**	**6.11**	**21,271**	**26,904**	**2.35**	**26.48**
Census Tract 12	1,533	1,808	1.65	17.94	507	658	2.61	29.78
Census Tract 13	2,064	2,850	3.23	38.08	1,090	1,664	4.23	52.66
Ceensus Tract 14	2,147	2,539	1.68	18.26	1,170	1,527	2.66	30.51
Chaves in Study Area	**5,744**	**7,197**	**2.26**	**25.30**	**2,767**	**3,849**	**3.30**	**39.10**
Eddy County								
Census Tract 1	1,553	1,544	-0.06	-0.58	430	499	1.49	16.05
Census Tract 2	4,179	4,416	0.55	5.67	353	528	4.03	49.58
Census Tract 3	5,552	5,375	-0.32	-3.19	1,147	1,373	1.80	19.70
Census Tract 4.01	3,611	3,591	-0.06	-0.55	930	967	0.39	3.98
Census Tract 4.02	4,696	4,345	-0.78	-7.47	1,839	1,715	-0.70	-6.74
Census Tract 5	3,502	3,323	-0.52	-5.11	2,032	2,050	0.09	0.89
Census Tract 6	4,978	5,506	1.01	10.61	2,354	2,752	1.56	16.91
Census Tract 7	3,810	5,015	2.75	31.63	1,117	1,818	4.87	62.76
Census Tract 8	1,851	2,078	1.16	12.26	1,273	1,388	0.86	9.03
Census Tract 9	3,310	4,415	2.88	33.38	1,127	1,526	3.03	35.40
Census Tract 10	5,646	5,974	0.56	5.81	3,165	3,513	1.04	11.00
Census Tract 1	5,917	6,076	0.27	2.69	1,377	1,894	3.19	37.55
Total	**48,605**	**51,658**	**0.61**	**6.28**	**17,144**	**20,023**	**1.55**	**16.79**
Lea County								
Census Tract 1	2,723	2,446	-1.07	-10.17	1,485	1,546	0.40	4.11
Census Tract 2	3,459	2,982	-1.48	-13.79	1,629	1,760	0.77	8.04
Census Tract 3	3,654	3,301	-1.02	-9.66	1,886	2,121	1.17	12.46
Census Tract 4	2,532	2,489	-0.17	-1.70	1,162	1,514	2.65	30.29
Census Tract 5.01	6,685	6,099	-0.92	-8.77	808	1,027	2.40	27.10
Census Tract 5.02	5,522	5,538	0.03	0.29	715	1,671	8.49	133.71
Census Tract 6	5,968	5,870	-0.17	-1.64	1,436	2,197	4.25	52.99
Census Tract 7	6,337	7,906	2.21	24.76	762	1,972	9.51	158.79
Census Tract 8	3,014	2,896	-0.40	-3.92	772	1,072	3.28	38.86
Census Tract 9	2,335	2,118	-0.98	-9.29	812	857	0.54	5.54
Census Tract 10.02	6,053	6,254	0.33	3.32	2,767	3,352	1.92	21.14
Census Tract 10.03	3,676	3,636	-0.11	-1.09	1,432	1,685	1.63	17.67
Census Tract 11	3,807	3,976	0.43	4.44	932	1,236	2.82	32.62
Total	**55,765**	**55,511**	**-0.05**	**-0.46**	**16,598**	**22,010**	**2.82**	**32.61**
Study Area	**110,114**	**114,366**	**0.38**	**3.86**	**36,509**	**45,882**	**2.29**	**25.67**

Note: The Chaves County totals are presented in the table but only figures from Census Tracts 12 to 14 are included in the study area..

Map 5
Urban Areas In the Study Area
(Source: Census 2000 Summary File 1)

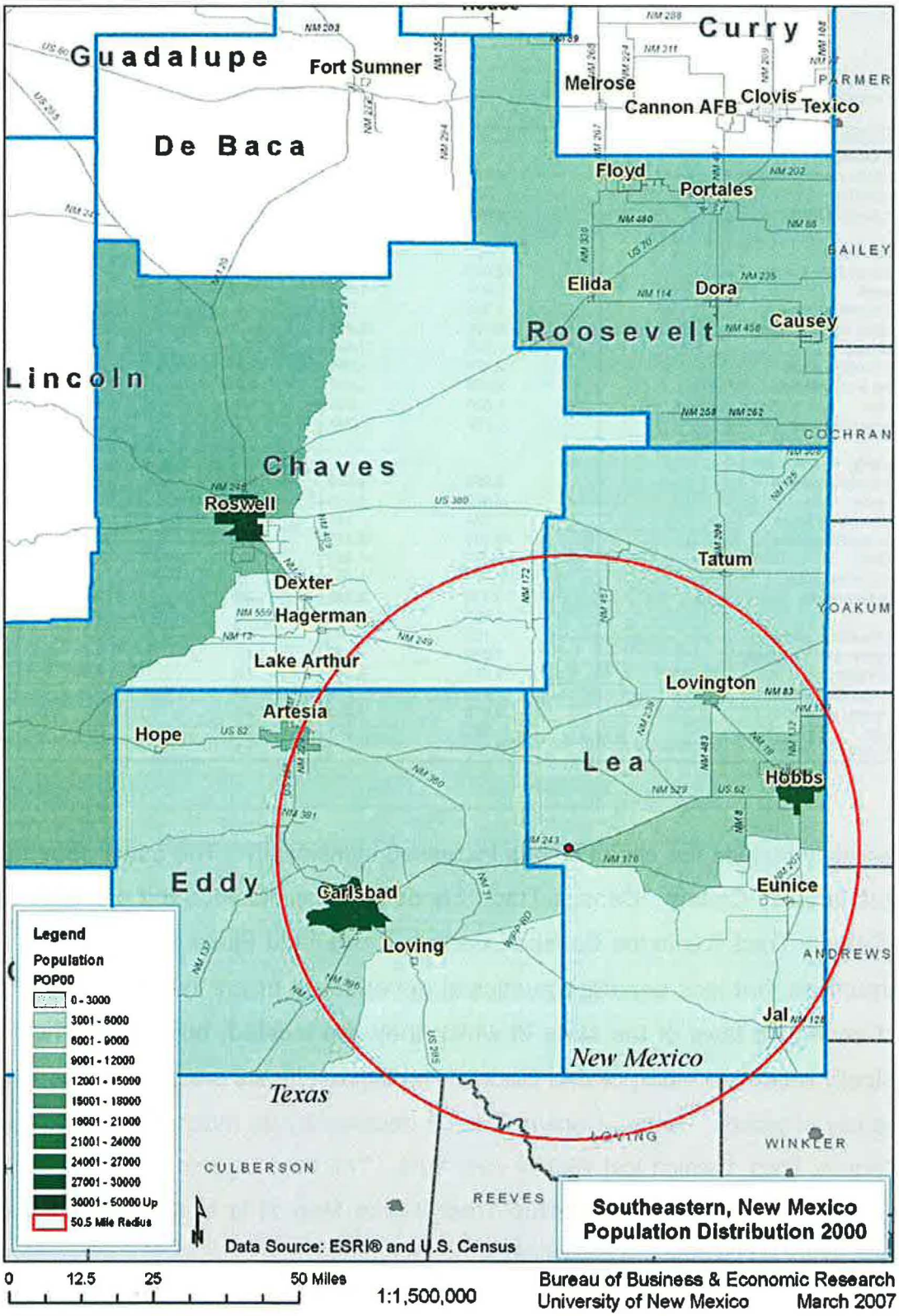


Table 3
Urban Population and Housing in the Study Area: Census 2000
(Source: Census 2000 Summary File 1)

Cities and Surrounding Areas Within the 50.5 Mile Radius	Census 2000			
	Population	Housing Units	Percent Share in Total Study Area Urban Population	Percent Share in Total Study Area Urban Housing Units
Total Population in Study Area	**102,086**	**43,521**	**100.0**	**100.0**
Chaves County				
Lake Arthur and environs	***4,347***	***1,675***	***4.3***	***3.8***
Lake Arthur	432	149	0.4	*0.3*
Surrounding areas	3,915	1,526	3.8	*3.5*
Eddy County				
Artesia and environs	***12,050***	***5,156***	***11.8***	***11.8***
Artesia	10,692	4,593	10.5	*10.6*
Surrounding areas	1,358	563	1.3	*1.3*
Carlsbad and environs	***28,100***	***12,476***	***27.5***	***28.7***
Carlsbad	25,625	11,421	25.1	*26.2*
Surrounding areas	2,475	1,055	2.4	*2.4*
Loving and environs	***2,078***	***809***	***2.0***	***1.9***
Loving	1,326	516	1.3	*1.2*
Surrounding areas	752	293	0.7	*0.7*
Lea County				
Eunice and environs	***2,896***	***1,251***	***2.8***	***2.9***
Eunice	2,562	1,110	2.5	*2.6*
Surrounding areas	334	141	0.3	*0.3*
Hobbs and environs	***36,631***	***15,235***	***35.9***	***35.0***
Hobbs	28,657	11,968	28.1	*27.5*
Surrounding areas	7,974	3,267	7.8	*7.5*
Jal and environs	***2,118***	***1,043***	***2.1***	***2.4***
Jal	1,996	957	2.0	*2.2*
Surrounding areas	122	86	0.1	*0.2*
Lovington and environs	***9,890***	***4,023***	***9.7***	***9.2***
Lovington	9,471	3,823	9.3	*8.8*
Surrounding areas	419	200	0.4	*0.5*
Tatum and environs	***3,976***	***1,853***	***3.9***	***4.3***
Tatum	683	391	0.7	*0.9*
Surrounding areas	3,293	1,462	3.2	*3.4*

immediately outside the city of Hobbs increased significantly. The same appears to be true in Eddy County. Census Tract 9 is outside the incorporated city of Artesia and Census Tract 7 is in the Carlsbad Census Designated Place (CDP). CDPs are communities that lack separate municipal government or are not legally incorporated under the laws of the state in which they are located, but which otherwise physically resemble incorporated places. The biggest losers are the Census Tracts in the city of Hobbs. Hobbs Census Tract 2 declined by as much as 14%, followed by Census Tract 1 which lost slightly over 10%. The third biggest loser, also in Lea County, is Census Tract 9. Census Tract 9 (see Map 1) is in south Lea County. Census Tract 9 includes the city of Jal.

The early part of this decade witnessed a continuation of this slower than average growth in the region. The compound annual average growth rate over the five-year period, from July 1, 2001 to July 1, 2005, was about four-tenths of one percent. In five years, the study area population increased its July 1, 2001 population by approximately two thousand people. Most of this growth occurred from July1, 2003 to 2005. Over 75% (76.8%) of this growth was in Lea County. In contrast to the last decade, all Census Tracts in Lea County had positive growth during the last five year period resulting in a higher than average increase for the county overall. As in the last decade, Census Tract 7 continues to outpace the rest of Lea County. On the other hand, the population growth rate in the Lake Arthur area of Chaves County dropped precipitously, from an annual growth rate of 2.2% in the previous decade to half of a percent (0.45%) in the last five years. The population of Eddy County practically remained unchanged during the period.

Comparative BBER and Census Bureau estimates (in parentheses) are the following: July 1, 2001 and July 1, 2005 for the counties in the study area: July 1, 2001: Chaves County, 61,660 (61,073); Eddy County, 51,842 (50,921); Lea County 55,690 (55,035). For July 1, 2005: Chaves County, 62,282 (61,861); Eddy County, 52,167 (51,269); and Lea County, 57,170 (56,650). Consistently, The Census Bureau estimates have been consistently lower. The Census Bureau's methodology is a top-down approach wherein the national population is estimated first and is used as a control total for all county populations. The county populations are independently estimated but if their total is not consistent with the national total, a raking factor is calculated to adjust the county populations. Further, if a county can prove that the estimate of its population was lower than expected, the Census Bureau will take this county's population gain from another county. The national total would not adjusted upwards to accommodate this county increase.

Table 4 indicates that population growth in the study area was primarily from natural increase or the difference between births and deaths. By and large, the region had lost close to 2,500 people from out-migration. The total popula

Table 4
Study Area Population Estimates and Growth: July 1, 2000 to July 1, 2005
(Source: UNM Bureau of Business and Economics Research, 4/2007)

Census Tract	Population Estimates as of July 1...					Population Growth	
	2001	2002	2003	2004	2005	Compound Annual Average Growth Rate	Percent Change from 2001 to 2005

tion increase during the period was slightly over 2,000 people. The increase as a result of natural increase was approximately 4,500 people. Population change due to

migration was calculated by subtracting change due to natural increase from total population change. A negative result indicates that more people left

Table 5
Component of Population Change, by Census Tract from 2000 to 2005
(Source: NM Department of Health Vital Statistics Record)

Study Area	*Number of ...*			Total Population Change	Residual
	Births	Deaths	Natural Increase		
Chaves County	**4,727**	**3,022**	**1,705**	**622**	**-1,083**
Census Tract 12	113	44	70	38	-32
Census Tract 13	284	49	235	122	-113
Census Tract 14	256	60	195	3	-193
Total	**653**	**153**	**500**	**162**	**-338**
Eddy County					
Census Tract 1	122	113	8	34	26
Census Tract	183	255	-72	6	78
Census Tract 3	447	729	-282	34	316
Census Tract 4.01	272	180	92	14	-79
Census Tract 4.02	478	196	282	0	-282
Census Tract 5	374	206	168	15	-153
Census Tract 6	502	484	18	-38	-56
Census Tract 7	381	174	207	-20	-227
Census Tract 8	204	44	160	18	-142
Census Tract 9	237	154	84	73	-10
Census Tract 10	596	345	251	92	-159
Census Tract 11	563	332	231	98	-133
Total	**4,358**	**3,211**	**1,147**	**325**	**-822**
Lea County					
Census Tract 1	357	162	196	89	-106
Census Tract 2	445	147	298	14	-285
Census Tract 3	478	171	308	59	-249
Census Tract 4	430	111	319	27	-292
Census Tract 5.01	612	293	319	72	-247
Census Tract 5.02	674	272	402	95	-307
Census Tract 6	659	513	146	178	32
Census Tract 7	416	367	49	832	783
Census Tract 8	135	116	19	39	20
Census Tract 9	78	63	14	19	5
Census Tract 10.02	723	244	480	79	-401
Census Tract 10.03	439	228	211	45	-166
Census Tract 11	163	72	91	32	-59
Total	**5,610**	**2,759**	**2,851**	**1,580**	**-1,271**
Study Area Total	**10,621**	**6,123**	**4,498**	**2,067**	**-2,431**

Note: Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

than came to stay in the area. The biggest sender was Lea County. More than 50% (-1,270) of all leavers were from Lea County. However, Lea County still posted a positive growth, a gain of more than 1,600 people as a result of natural increase. Eddy County lost over 800 people to migration but it had a net gain of over 300 people from natural increase. The Lake Arthur area had an overall gain of 162 people during the five year period. This population growth albeit very modest is consistent with residential construction trend reported for the period.

Housing Levels and Trends

This section will present data on housing stocks, occupancy, and new building permits. Housing stocks and tenure were extracted from the Census 2000 Summary File 1. Occupancy refers to the number and proportion of housing units that were occupied at the time of the Census and can be used as a proxy for housing turnover rates. These occupancy rates are assumed to stay the same during the remainder of the decade. New building permits were processed from the New Mexico Construction and Industries Division data base and from hard copy reports from the city of Hobbs, a special permitting place.

Housing Stock and Occupancy. Table 6 summarizes the distribution of housing by type and census tract. A total of 41,370 housing units were counted in the study area in the year 2000. Of these, 74% (30,828 units) were single-detached units, 8% (3,237 units) were apartments, and 18% (7,304 units) were mobile or manufactured homes. Lea County (47.6%) and Eddy County (46.8%) almost have the same number of housing units regardless of type. Broken down by type of housing, 74% of Eddy County's total housing units were single-detached units compared to 77% in Lea County and 66% in the Lake Arthur area. Table 6 shows the housing dispersion within each county by Census Tract.

The number of occupied housing units varied considerably by housing type. In general, single-detached housing units had the highest occupancy rate at 88%. Apartments or multiple housing units have the lowest, with just below

Table 6
Housing Stock and Occupancy Rate, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Housing Units				Occupancy Rate			
	Single Detached	Two or more Units	Mobile Home	Total	Single Detached	Two or more Units	Mobile Home	Total
Chaves County	***17,113***	***2,267***	***3,181***	***22,561***	***89.5***	***83.4***	***83.5***	***88.0***
Census Tract 12	366	0	241	607	73.5	(no units)	97.6	81.5
Census Tract 13	600	33	223	856	90.4	91.7	85.8	89.2
Census Tract 14	551	17	260	828	88.3	100.0	88.7	88.7
Total	**1,517**	**50**	**724**	**2,291**	**84.9**	**94.3**	**90.5**	**86.8**
			Eddy County					
Census Tract 1	519	117	7	643	86.5	77.0	100.0	84.7
Census Tract 2	1,449	118	187	1,754	94.3	88.7	100.0	94.5
Census Tract 3	1,912	335	20	2,267	89.6	80.1	100.0	88.1
Census Tract 4.01	971	131	213	1,315	91.3	75.3	81.3	87.7
Census Tract 4.02	1,415	194	46	1,655	87.9	79.8	100.0	87.2
Census Tract 5	1,135	130	7	1,272	84.1	80.7	38.9	83.2
Census Tract 6	1,269	64	649	1,982	89.7	62.1	76.8	83.9
Census Tract 7	785	32	905	1,722	89.4	64.0	80.6	84.0
Census Tract 8	474	21	199	694	85.9	84.0	85.8	85.8
Census Tract 9	777	14	745	1,536	81.6	100.0	94.2	87.4
Census Tract 10	1,457	304	407	2,168	87.5	80.9	85.0	86.0
Census Tract 11	2,085	206	80	2,371	91.3	84.1	75.5	90.0
Total	**14,248**	**1,666**	**3,465**	**19,379**	**88.8**	**79.6**	**84.2**	**87.1**
			Lea County					
Census Tract 1	654	97	152	903	79.1	51.9	64.1	72.2
Census Tract 2	723	54	274	1,051	73.2	70.1	79.9	74.6
Census Tract 3	749	74	250	1,073	76.3	77.9	77.6	76.7
Census Tract 4	540	220	173	933	86.8	80.9	61.8	79.5
Census Tract 5.01	1,988	368	72	2,428	94.5	82.9	60.0	91.0
Census Tract 5.02	1,645	347	157	2,149	89.0	89.2	85.8	88.8
Census Tract 6	1,924	77	64	2,065	90.7	72.6	59.3	88.4
Census Tract 7	1,380	51	895	2,326	95.2	100.0	82.9	90.2
Census Tract 8	821	36	206	1,063	86.1	63.2	85.8	85.0
Census Tract 9	720	8	68	796	76.5	66.7	75.6	76.3
Census Tract 10.02	1,698	101	324	2,123	87.8	79.5	78.8	85.8
Census Tract 10.03	1,157	73	107	1,337	89.9	62.9	72.8	86.3
Census Tract 11	1,064	15	373	1,452	80.6	60.0	73.4	78.4
Total	**15,063**	**1,521**	**3,115**	**19,699**	**86.7**	**77.7**	**76.6**	**84.2**
Study Area	**30,828**	**3,237**	**7,304**	**41,369**	**87.6**	**78.9**	**81.3**	**85.7**

Note: *Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

80% occupancy. Manufactured or mobile homes had 81% occupancy rate. At the county level, the Lake Arthur area deviates from this occupancy pattern. In Lake Arthur, single-detached housing units had the lowest occupancy rate at 85%; apartments had the highest at 94%; and Mobile or manufactured homes had 91% occupancy. Meanwhile, Eddy and Lea counties closely track the general occupancy pattern wherein the highest occupancy rate was among single-detached housing units; Eddy County and Lea County had occupancy rates of
89% and 87%, respectively. Mobile homes (84.2%) in Eddy County had a higher occupancy rate than apartments (79.6%) whereas no significant differences were noted between these two types of housing In Lea County.

Vacancy and Turnover Rate. The Census 2000 Summary File 3 provides data on vacant housing units and what these units are for, i.e., for rent, sold or rented but not occupied, for sale, seasonal or recreational housing, for migrant housing, and other. The housing market in the region was fairly open, with 17% of all housing units reported vacant in the Census 2000. Lea County had the highest vacancy rate at 19%; Eddy County 15%, and the Lake Arthur area, 15%. Of the approximately 6,925 vacant housing units in 2000, 53% (3,706) was in Lea County, 41% (2,870) was in Eddy County, and the rest was in Lake Arthur (348).

Table 8 shows that of the total vacant housing units, 35% was for rent, 36% was vacant for other reasons, 15% was for sale, 8% was sold or rented but remained vacant, 7% were for second homes for recreational purposes, and a very small proportion, 0.7%, for migrant workers. Among the counties, Eddy County has the largest proportion (38.3%) that was for rent compared to 33% in Lea County and 14% in the Lake Arthur area. The proportion of housing units for sale did not deviate significantly among the counties: 15% in Eddy County, 14% in Lea County, and 13% in the Lake Arthur area. Among census tracts, Census Tract 3 in Eddy County had the highest proportion of for sale units; 37% of all the vacant housing units in this census tract were for sale. A distant second was Census Tract 5.01 in Lea County, with 23% for sale. A close third was Census Tract 9 in Lea County where 22% of the vacant units were for sale. Rental properties were most prevalent in Census Tract 1 in Lea

County. Exactly 55% of the 350 vacant housing units in this census tract were for rent. The area with the lowest proportion of rental units was Census Tract 11 with only 5% that was for rent. In this census tract, 65% was vacant for other reasons.

Table 7
Vacant Housing Units, by Type: Census 2000
(Source: Census 2000 Summary File 1)

Study Area	Total Vacant Units	For rent	For sale only	Rented or sold, not occupied	For seasonal, recreational, or occasional use	For migrant workers	Other vacant
Chaves County	***3,086***	***1,021***	***501***	***278***	***260***	***18***	***1,008***
Census Tract 12	133	8	13	14	36	3	59
Census Tract 13	109	25	12	10	13	1	48
Census Tract 14	106	16	19	13	12	7	39
Total	**348**	**49**	**44**	**37**	**61**	**11**	**146**
			Eddy County				
Census Tract 1	102	46	10	2	5	0	39
Census Tract 2	116	34	43	9	9	0	21
Census Tract 3	305	152	57	10	11	1	74
Census Tract 4.01	185	69	33	2	11	0	70
Census Tract 4.02	243	126	41	9	3	0	64
Census Tract 5	256	127	40	19	5	0	65
Census Tract 6	381	190	47	12	30	0	102
Census Tract 7	329	53	40	6	129	1	100
Census Tract 8	115	29	18	0	18	3	47
Census Tract 9	221	34	20	10	24	17	116
Census Tract 10	353	143	28	18	23	5	136
Census Tract 11	264	96	47	18	16	1	86
Total	**2,870**	**1,099**	**424**	**115**	**284**	**28**	**920**
			Lea County				
Census Tract 1	350	193	38	38	4	1	76
Census Tract 2	357	132	45	68	4	0	108
Census Tract 3	320	101	28	54	8	0	129
Census Tract 4	245	111	19	45	4	0	66
Census Tract 5.01	239	107	56	29	4	0	43
Census Tract 5.02	272	146	48	10	8	0	60
Census Tract 6	271	122	51	23	4	0	71
Census Tract 7	253	43	28	20	18	1	143
Census Tract 8	188	27	24	13	8	0	116
Census Tract 9	247	33	54	30	13	1	116
Census Tract 10.02	350	111	58	18	9	0	154
Census Tract 10.03	213	92	31	18	4	1	67
Census Tract 11	401	20	55	27	32	6	261
Total	**3,706**	**1,238**	**535**	**393**	**120**	**10**	**1,410**
Study Area	**6,924**	**2,386**	**1,003**	**545**	**465**	**49**	**2,476**

Note: *Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

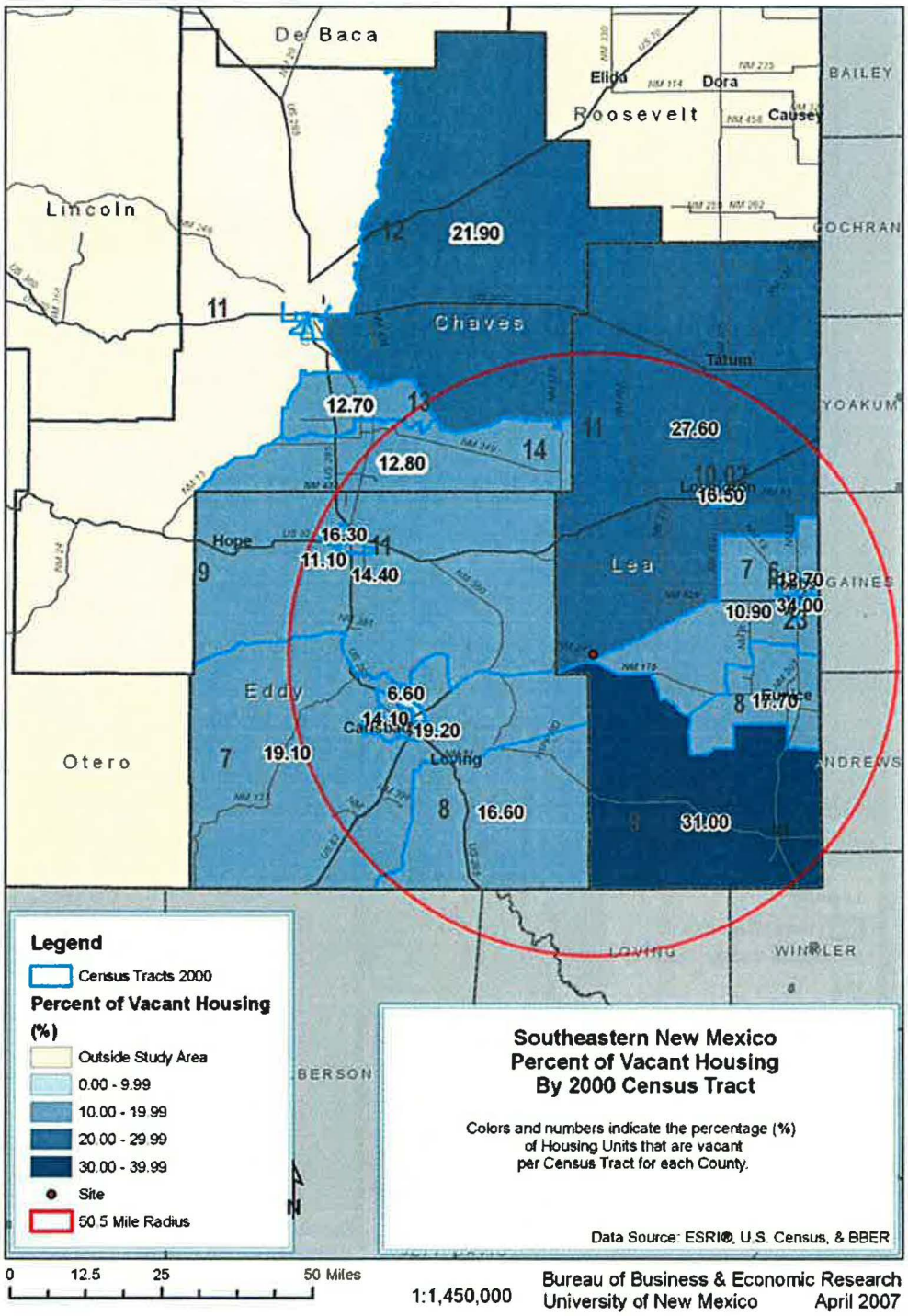
Maps 6 to 8 locate the vacant housing units at the census tract level in each county. Figure 1 illustrates the differential distribution of vacancies in each county by census tract.

Table 8
Distribution of Vacant Housing Units, by Census Tracts: Census 2000
(Source: Census 2000 Summary File 1)

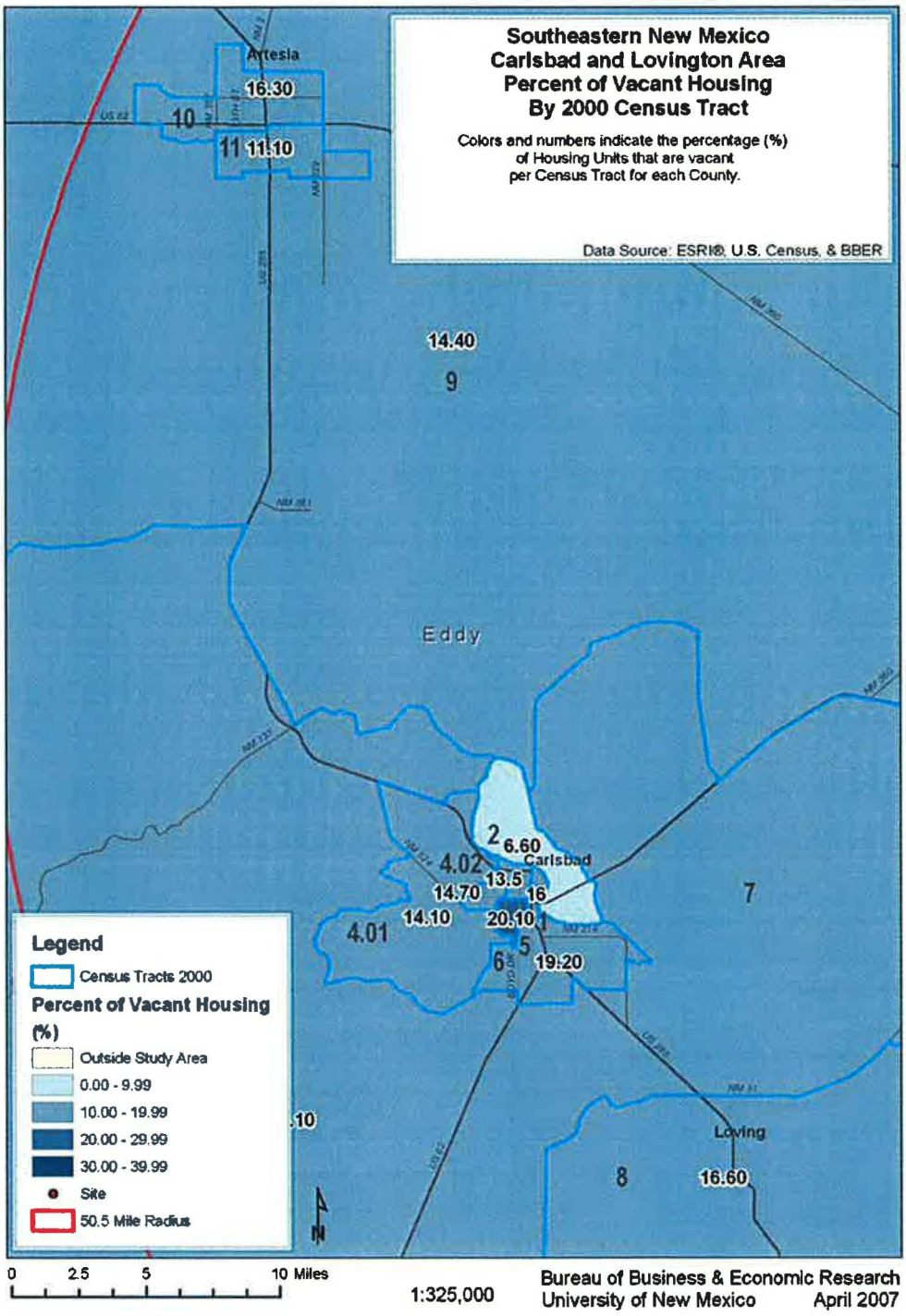
Study Area	Vacancy Rate	Total Vacant Units	For rent	For sale only	Rented or sold, not occupied	For seasonal, recreational, or occasional use	For migrant workers	Other vacant
Chaves County	***13.7***	***100.0***	***33.1***	***16.2***	***9.0***	***8.4***	***0.6***	***32.7***
Census Tract 12	21.9	100.0	6.0	9.8	10.5	27.1	2.3	44.4
Census Tract 13	12.7	100.0	22.9	11.0	9.2	11.9	0.9	44.0
Census Tract 14	12.8	100.0	15.1	17.9	12.3	11.3	6.6	36.8
Total	**15.2**	**100.0**	**14.1**	**12.6**	**10.6**	**17.5**	**3.2**	**42.0**
Eddy County								
Census Tract 1	16.0	100.0	45.1	9.8	2.0	4.9	0.0	38.2
Census Tract 2	6.6	100.0	29.3	37.1	7.8	7.8	0.0	18.1
Census Tract 3	13.5	100.0	49.8	18.7	3.3	3.6	0.3	24.3
Census Tract 4.01	14.1	100.0	37.3	17.8	1.1	5.9	0.0	37.8
Census Tract 4.02	14.7	100.0	51.9	16.9	3.7	1.2	0.0	26.3
Census Tract 5	20.1	100.0	49.6	15.6	7.4	2.0	0.0	25.4
Census Tract 6	19.2	100.0	49.9	12.3	3.1	7.9	0.0	26.8
Census Tract 7	19.1	100.0	16.1	12.2	1.8	39.2	0.3	30.4
Census Tract 8	16.6	100.0	25.2	15.7	0.0	15.7	2.6	40.9
Census Tract 9	14.4	100.0	15.4	9.0	4.5	10.9	7.7	52.5
Census Tract 10	16.3	100.0	40.5	7.9	5.1	6.5	1.4	38.5
Census Tract 11	11.1	100.0	36.4	17.8	6.8	6.1	0.4	32.6
Total	**14.8**	**100.0**	**38.3**	**14.8**	**4.0**	**9.9**	**1.0**	**32.1**
Lea County								
Census Tract 1	39.3	100.0	55.1	10.9	10.9	1.1	0.3	21.7
Census Tract 2	34.0	100.0	37.0	12.6	19.0	1.1	0.0	30.3
Census Tract 3	29.2	100.0	31.6	8.8	16.9	2.5	0.0	40.3
Census Tract 4	26.6	100.0	45.3	7.8	18.4	1.6	0.0	26.9
Census Tract 5.01	9.8	100.0	44.8	23.4	12.1	1.7	0.0	18.0
Census Tract 5.02	12.7	100.0	53.7	17.6	3.7	2.9	0.0	22.1
Census Tract 6	13.1	100.0	45.0	18.8	8.5	1.5	0.0	26.2
Census Tract 7	10.9	100.0	17.0	11.1	7.9	7.1	0.4	56.5
Census Tract 8	17.7	100.0	14.4	12.8	6.9	4.3	0.0	61.7
Census Tract 9	31.0	100.0	13.4	21.9	12.1	5.3	0.4	47.0
Census Tract 10.02	16.5	100.0	31.7	16.6	5.1	2.6	0.0	44.0
Census Tract 10.03	15.9	100.0	43.2	14.6	8.5	1.9	0.5	31.5
Census Tract 11	27.6	100.0	5.0	13.7	6.7	8.0	1.5	65.1
Total	**18.8**	**100.0**	**33.4**	**14.4**	**10.6**	**3.2**	**0.3**	**38.0**
Study Area	**16.7**	**100.0**	**34.5**	**14.5**	**7.9**	**6.7**	**0.7**	**35.8**

Note: *Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

Map 6
Distribution of Vacant Housing Units, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)



Map 7
Distribution of Vacant Housing Units in Carlsbad and Artesia: Census 2000
(Source: Census 2000 Summary File 3)



Map 8
Distribution of Vacant Housing Units in Hobbs and Lovington: Census 2000
(Source: Census 2000 Summary File 3)

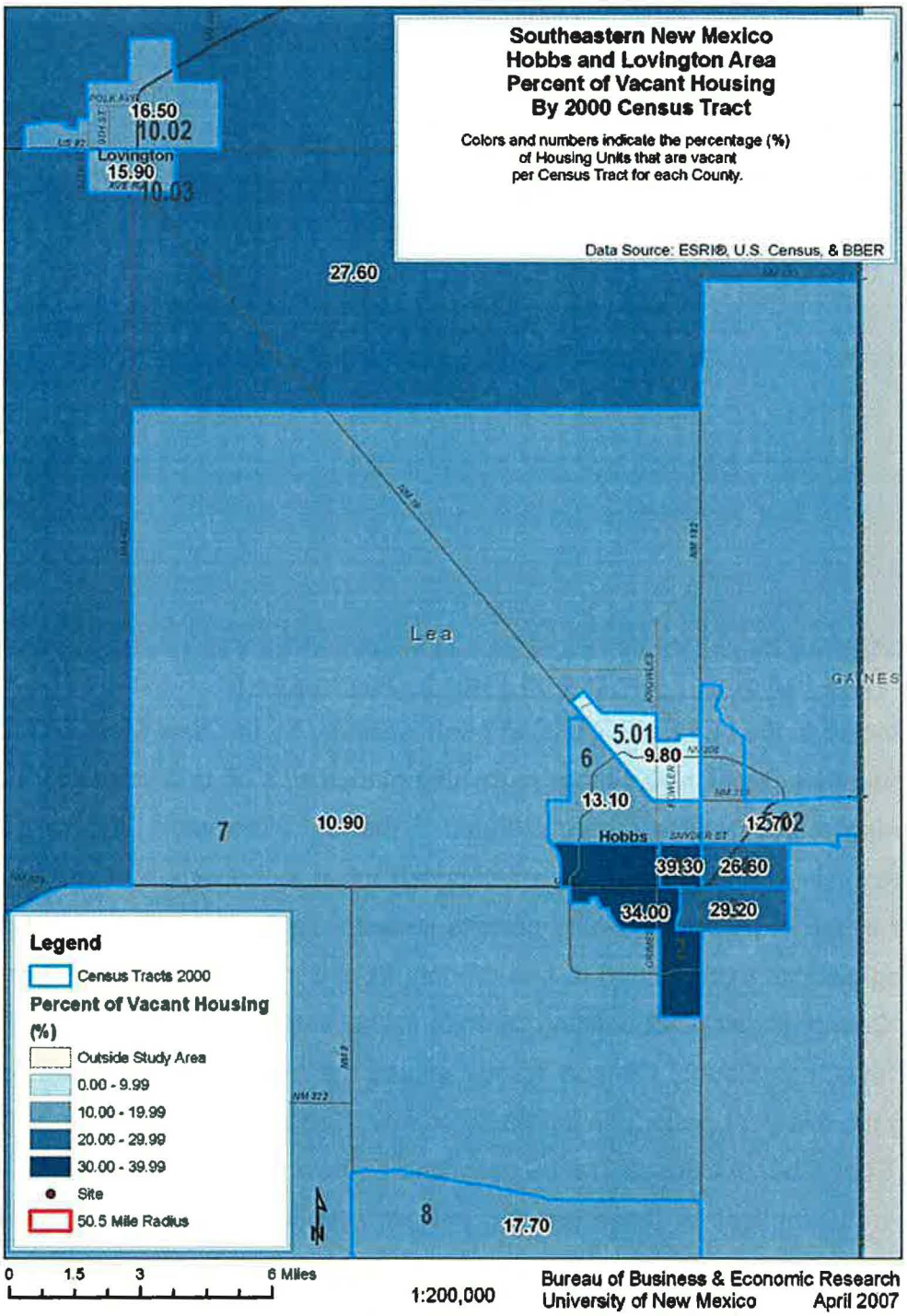
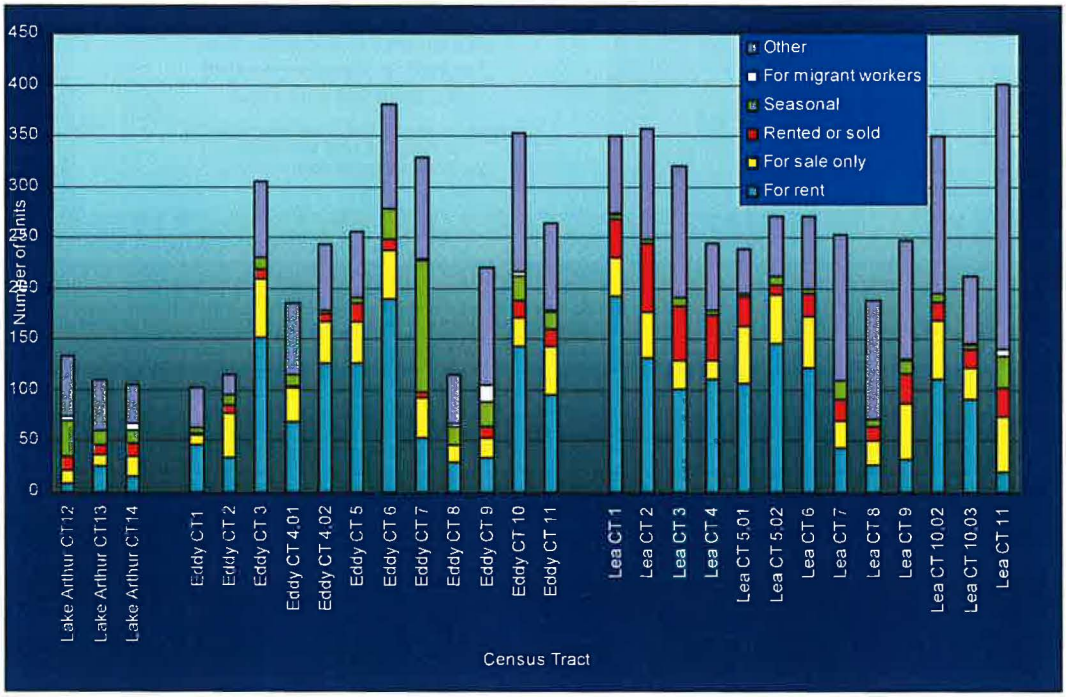


Figure 1
Distribution of Vacant Housing Units, by Census Tract: Census 2000
(Source: Census 2000 Summary File 1)



New Building Permits and Future Development . Residential construction as reflected in the number of building permits issued by the New Mexico Construction and Industries Division and other permitting places was off to a very slow start at the beginning of this decade but accelerated in the last three years. Figure 2 highlights this increasing trend in new residential construction in the region. Lea County is the leader in the number of building permits issued. Table 9 shows that a total of 377 building permits were issued in Lea County from January 2000 to December 2005. Eddy County issued 289 building permits in the same time period. At the Census Tract level, Lea County Census Tract 7 issued the most number of permits, 87 total during the five-year period. In the same county, Census Tract 5.01 issued 74 permits while Eddy County Census Tract 9 permitted 51 new residential buildings. The geographic distributions of these building permits are illustrated in Maps 9 to 11. The darkest shade indicates the greatest concentration of new constructions. Conversely, the lightest shade shows the least number of new constructions. Evidently, most of the constructions were in close proximity to but outside incorporated places.

Interviews from developers and county officials indicate that more residential development is in the drawing board. Planning documents from Hobbs and Carlsbad also point to policy regulations favoring more development. Interviews from developers and county officials indicate that more residential development is in the drawing board. Planning documents from Hobbs and Carlsbad also point to policy regulations favoring more development. The increase in the number of building permits issued in the last three years, especially in Lea County, is a move in this direction. Nevertheless, there is little evidence of large-scale residential development in either Eddy or Lea County that can be supported by building permit records. One developer in Lea County has broken ground but the intention is to sell parcels rather than housing units.

Figure 2
Trend in Building Permits, by County: 2000 to 2005
(Source: NM Construction and Industries Division and City of Hobbs)

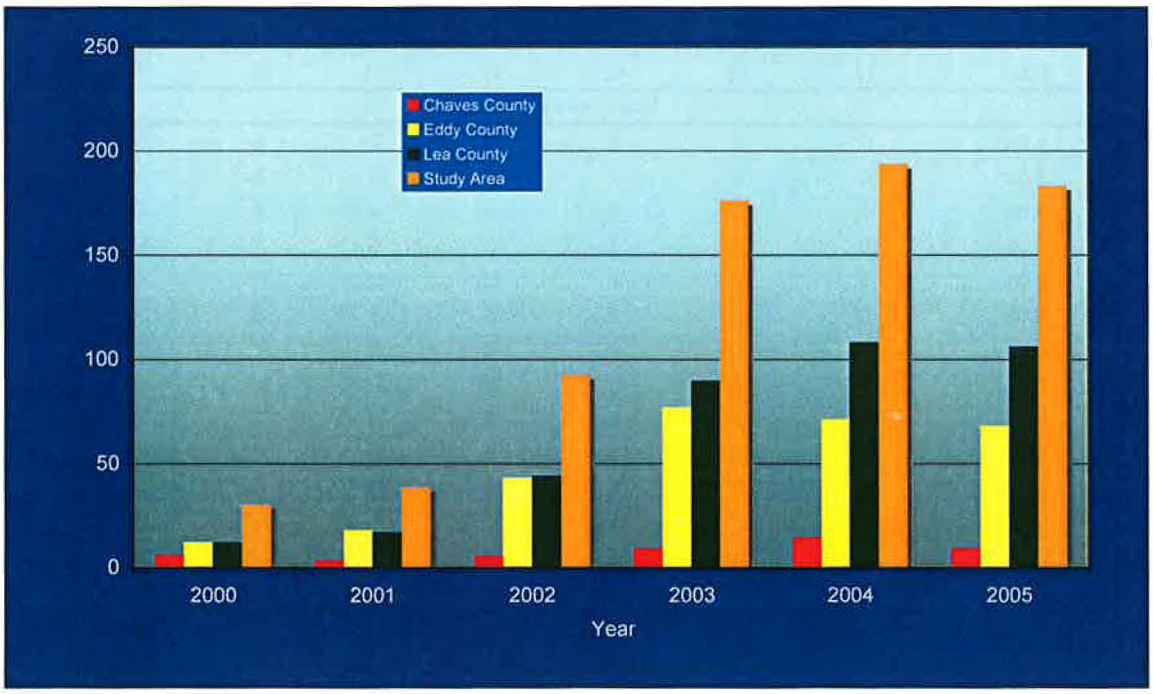
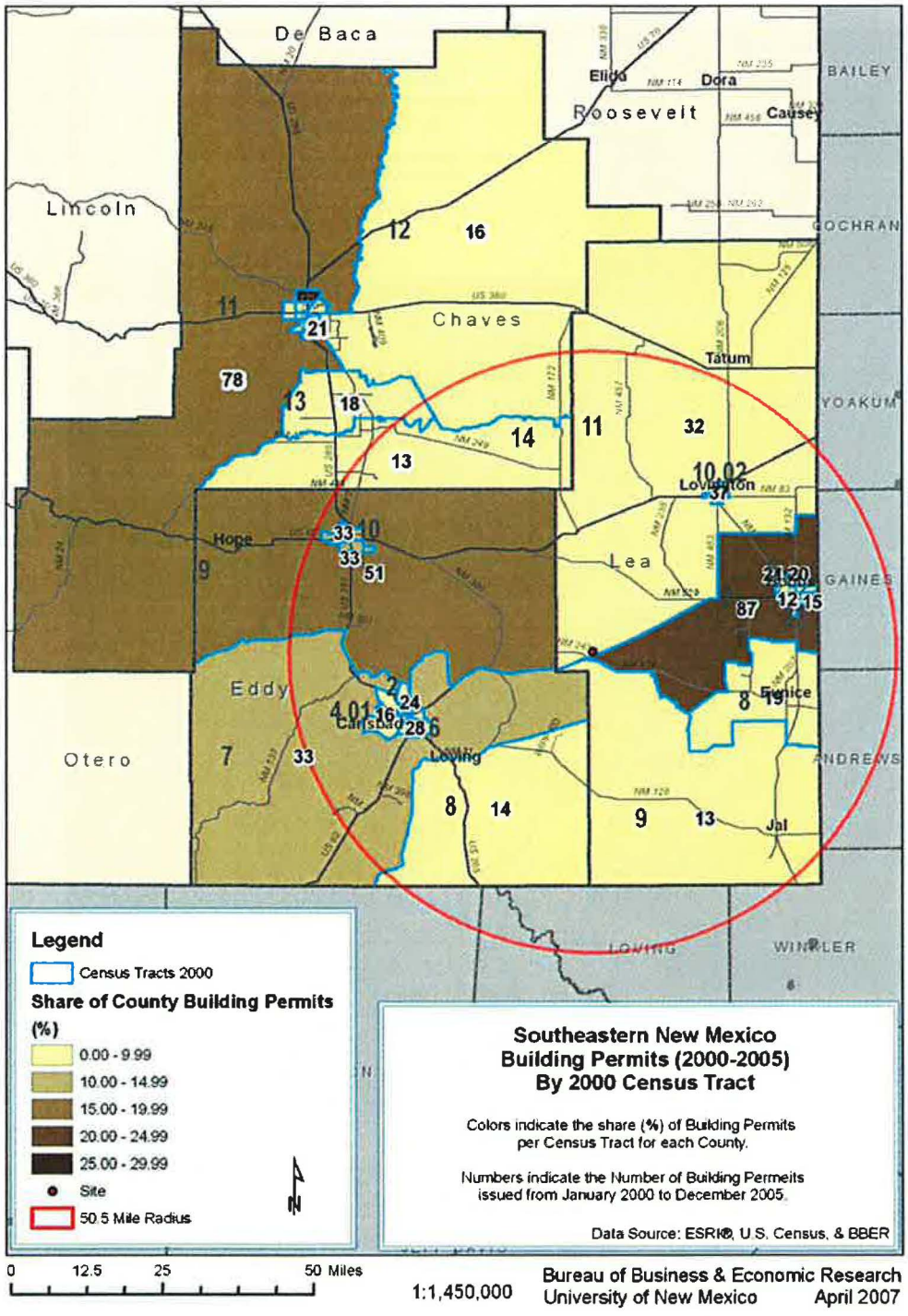


Table 9
Building Permits, by Census Tract: January 2000 to December 2005
(Source: NM Construction and Industries Division and City of Hobbs)

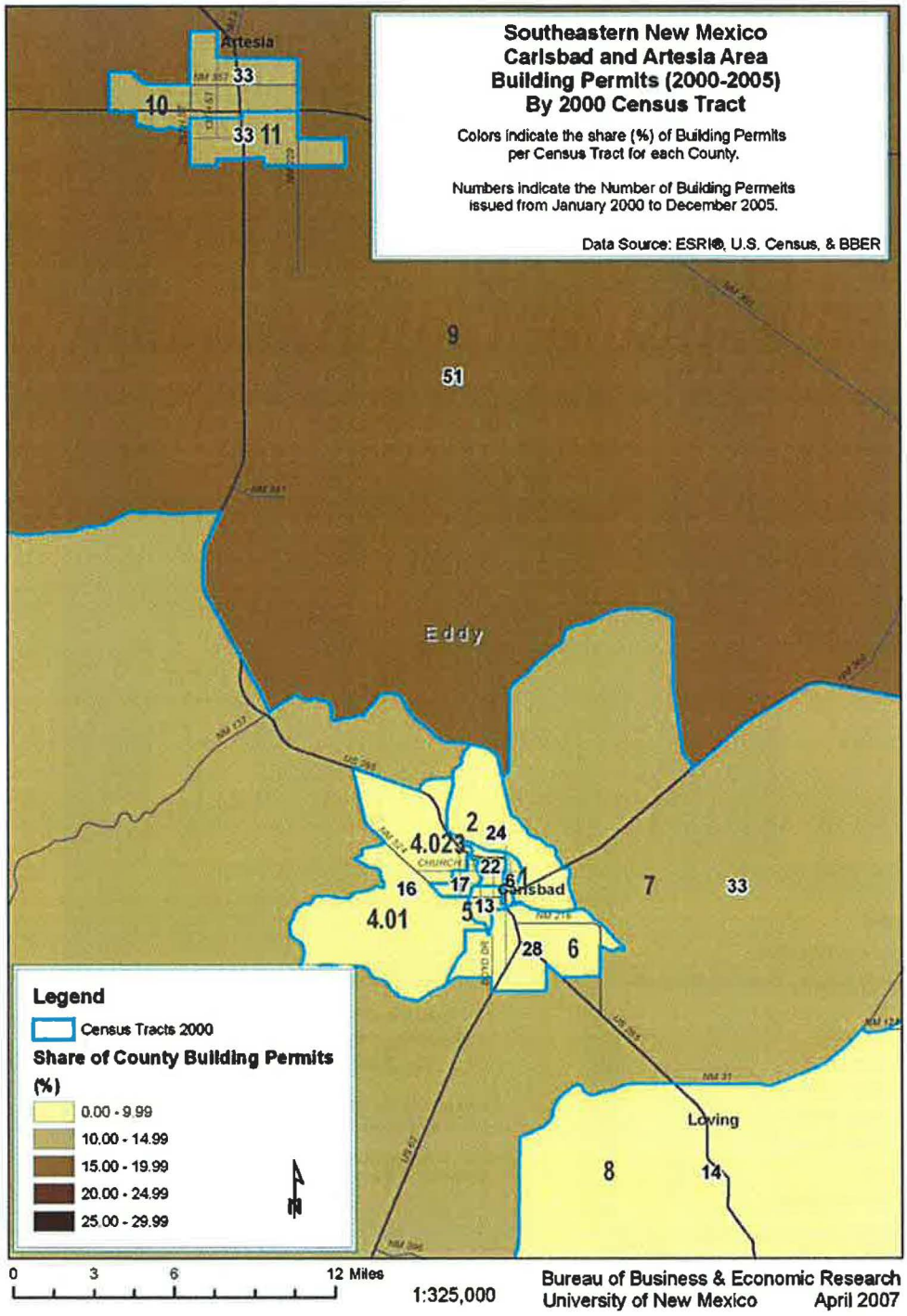
Study Area	*Building Permits as of December 31...*						
	2000	2001	2002	2003	2004	2005	Total
Chaves County	**61**	**37**	**50**	**93**	**143**	**98**	**482**
12.00	3	1	3	4	3	2	16
13.00	2	1	1	3	7	4	18
14.00	0	1	2	2	5	3	13
Total	**6**	**4**	**6**	**9**	**14**	**9**	**48**
Eddy County							
1.00	0	0	1	2	2	1	6
2.00	0	1	3	5	6	9	24
3.00	0	2	3	7	7	2	22
4.01	0	1	2	4	4	4	16
4.02	1	1	3	5	6	2	17
5.00	0	1	2	4	4	1	13
6.00	0	1	3	7	8	9	28
7.00	1	4	4	6	7	12	33
8.00	1	0	2	4	3	3	14
9.00	5	4	9	13	7	13	51
10.00	3	2	7	7	7	6	33
11.00	1	2	4	12	8	6	33
Total	12	18	43	77	71	68	289
Lea County							
1.00	0	2	3	3	3	2	14
2.00	0	0	1	4	4	3	12
3.00	1	0	1	5	4	4	15
4.00	0	2	1	3	3	2	12
5.01	1	6	8	15	28	15	74
5.02	0	0	2	6	7	5	20
6.00	0	0	2	6	6	7	21
7.00	5	6	10	20	24	21	87
8.00	0	0	4	3	4	7	19
9.00	1	0	1	4	3	4	13
10.02	2	0	4	8	9	15	37
10.03	0	0	1	5	6	9	22
11.00	2	1	5	8	5	12	32
Total	**12**	**17**	**44**	**90**	**108**	**106**	**377**
Study Area	**30**	**39**	**93**	**176**	**193**	**183**	**714**

Note: *Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

Map 9
Building Permits From January 2000 to December 2005: Census 2000
(Source: NM Construction and Industries Division and City of Hobbs)



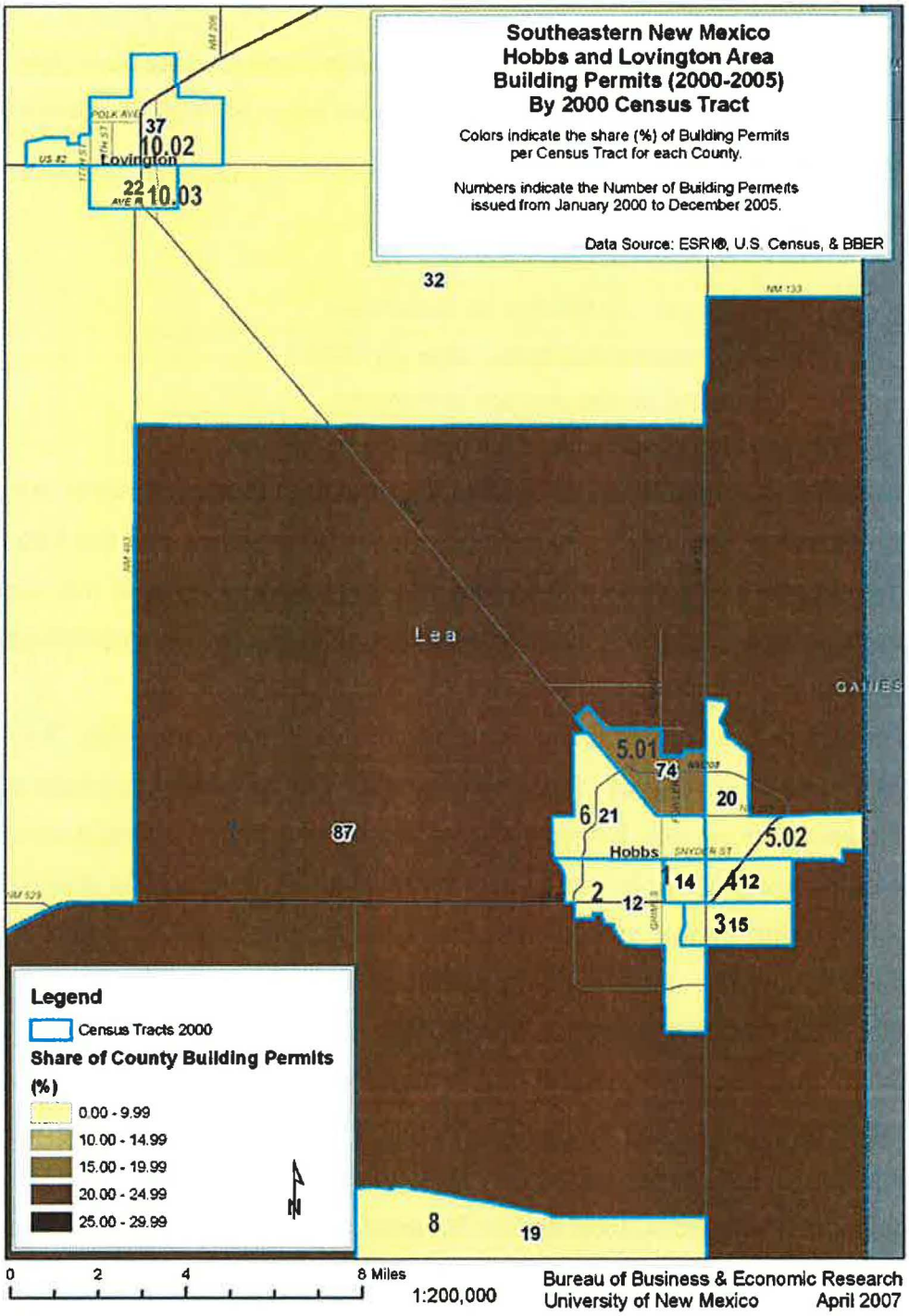
Map 10
Carlsbad and Artesia Building Permits from Jan. 2000 to Dec. 2005
(Source: NM Construction and Industries Division)



Map 11

Hobbs and Lovington Building Permits from Jan. 2000 to Dec. 2005

(Source: NM Construction and Industries Division)



Future Population Size

Table 6 presents a set of projections by Census Tract and County from July 1, 2010 to July 1, 2030. The projected population numbers were derived by a mathematical extrapolation method using the following formula:

$P_{t+n} = P_t\, e^{(rn)}$, where

P_{t+n} = Population at time + n or later year

P_t = Population at time t or an earlier year

e = is a constant equal to the value 2.7182818

r = compound annual average growth rate

n = number of years for which population is calculated.

The assumption is simple, that is, the compound annual average growth rate experienced during the period July 1, 2001 to July 1, 2005 continues into the future. This implies no change in the fertility, mortality, and migration patterns in the population. As in any projection exercise, this trend can change with future environmental conditions and demographic factors.

The numbers as presented in Table 10 come with a major caveat. For the very near future, as in the year 2010, the population numbers may have some currency. However, for periods longer than five years, these numbers must be used for heuristic purposes only ***not*** for policy decisionmaking. A more careful analysis of historical demographic as well as economic trends based on more data points is warranted if the data will be used for policy purposes.

BBER did a county projection from 2005 to 2030. This set of projections was based on the analysis of 15 years of birth and deaths data and migration streams calculated from Census 1990 and 2000. Starting in the late 1980s and throughout the 1990s, Lea County experienced very slow population growth and at times even lost population. Projections done by BBER based on the 1990s' trend indicated a population decline for this county. For example, the 1990s-based trend calculated Lea County's population for the year 2030 to decline to below 50,000 (49,417) people. Compared to the projected population based on this mathematical extrapolation, Lea County's population for the same year is

Table 10
Population Projections, by Census Tract: July 1, 2010 to July 1, 2030
(Source: Bureau of Business and Economic Research)

Census Tract	Population Projection As of July 1...				
	2010	2015	2020	2025	2030
Chaves County	**62,910**	**63,545**	**64,186**	**64,834**	**65,488**
Census Tract 12	1,862	1,901	1,941	1,982	2,024
Census Tract 13	3,168	3,300	3,438	3,581	3,730
Census Tract 14	2,494	2,496	2,499	2,502	2,504
Total	***7,522***	***7,691***	***7,864***	***8,041***	***8,222***
Eddy County					
Census Tract 1	1,740	1,776	1,812	1,850	1,887
Census Tract 2	4,579	4,585	4,591	4,596	4,602
Census Tract 3	5,551	5,586	5,621	5,657	5,692
Census Tract 4.01	3,738	3,752	3,766	3,779	3,793
Census Tract 4.02	4,293	4,293	4,293	4,293	4,293
Census Tract 5	3,316	3,331	3,346	3,361	3,376
Census Tract 6	5,352	5,315	5,278	5,241	5,204
Census Tract 7	4,906	4,886	4,866	4,845	4,825
Census Tract 8	2,092	2,110	2,128	2,146	2,165
Census Tract 9	4,526	4,602	4,679	4,757	4,837
Census Tract 10	6,183	6,277	6,373	6,471	6,569
Census Tract 11	6,221	6,322	6,425	6,529	6,635
Total	**52,498**	**52,835**	**53,177**	**53,526**	**53,881**
Lea County					
Census Tract 1	2,587	2,683	2,783	2,886	2,994
Census Tract 2	2,927	2,940	2,954	2,968	2,982
Census Tract 3	3,324	3,385	3,447	3,510	3,575
Census Tract 4	2,460	2,487	2,515	2,543	2,572
Census Tract 5.01	6,023	6,097	6,172	6,248	6,324
Census Tract 5.02	5,555	5,653	5,753	5,855	5,958
Census Tract 6	6,166	6,355	6,550	6,751	6,958
Census Tract 7	10,879	11,869	12,949	14,128	15,413
Census Tract 8	2,880	2,921	2,962	3,003	3,046
Census Tract 9	2,088	2,108	2,127	2,148	2,168
Census Tract 10.02	6,439	6,520	6,602	6,685	6,768
Census Tract 10.03	3,607	3,653	3,700	3,748	3,796
Census Tract 11	3,907	3,940	3,973	4,006	4,039
Total	**58,842**	**60,611**	**62,487**	**64,478**	**66,593**
Study Area	**118,862**	**121,137**	**123,529**	**126,045**	**128,696**

Note: *Only Lake Arthur (Census 14) and surrounding Census Tracts (12 and 13) are included in study area from Chaves County.

over 66,000, an increase of almost 10,000 from its July 1, 2001 population of approximately 56,000. Yet the compound annual average growth rate for Lea County from July 1, 2001 to July 1, 2005 was only 0.56%. The difference between the 2003 BBER and this extrapolated projection is significant, approximately 16,000 people. By comparison, the opposite pattern is noted in Eddy County. A strong showing in the 1990s resulted in a larger projected Eddy County population for the year 2030. The 1990s based BBER projection for 2030 was approximately 61,000 people compared to approximately 54,000 people from the mathematical extrapolated model. The difference between the projections is about 7,000 people. Nevertheless, both methodologies make assumptions that barring catastrophes and major changes in the economy, past and current trends determine future population trends. Perhaps, the reality lies between these two projection results. Regardless, projections need to be updated at least every 3 to 5 years, especially for places that are undergoing rapid economic and demographic change.

Race and Ethnic Composition of the Study Area Population

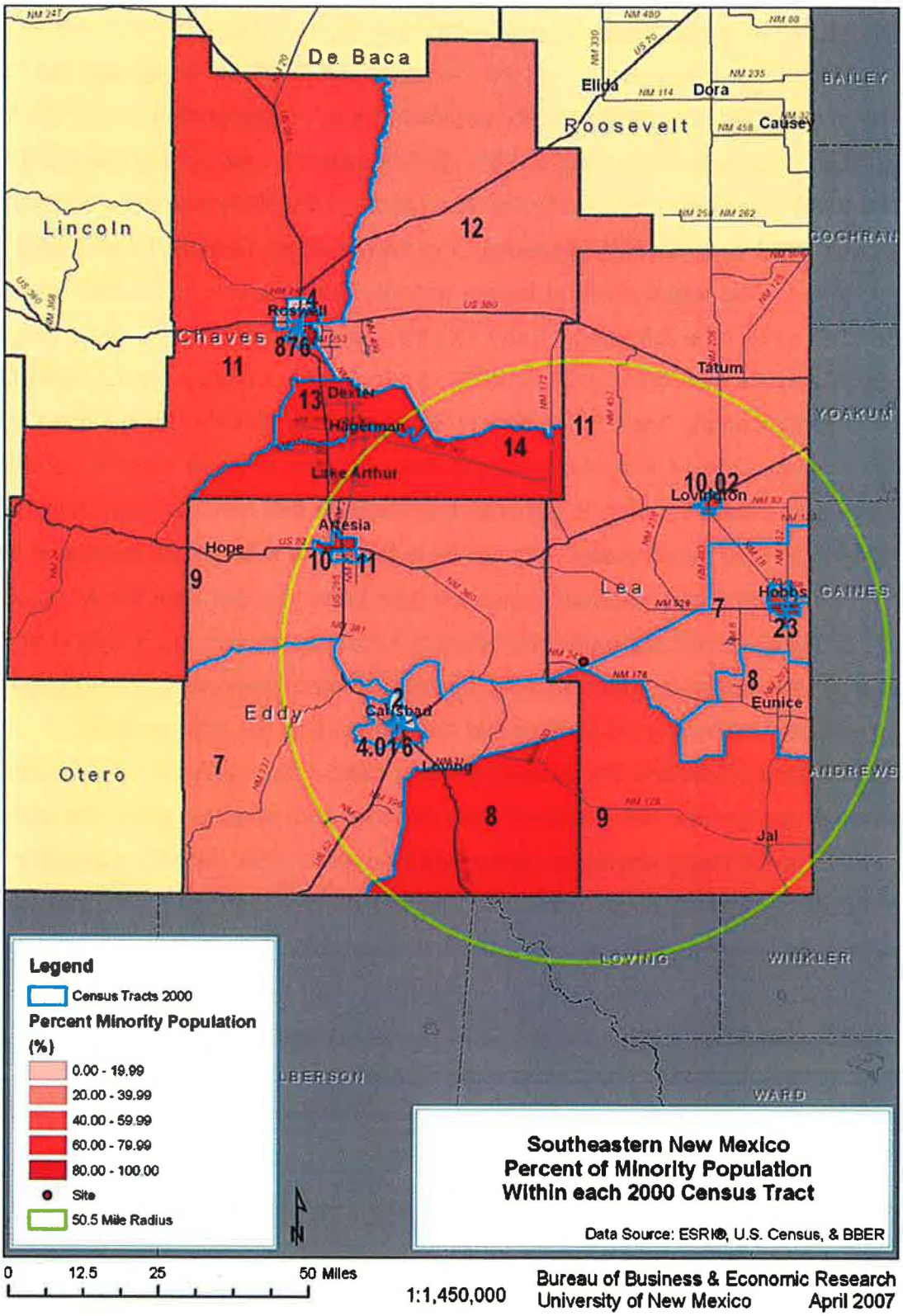
Table 2 above suggests that the race and ethnic composition of this region is changing. While overall population growth was very slow (.38% annually), the Hispanic population growth was above two percent (2.29%) annually. From 1990 to 2000, the Hispanic population in the study area increased by 26% or more than nine thousand people. In comparison, the overall study area population increased by only four percent (3.86%), or an increase of 4,300 people overall. Of the more than nine thousand Hispanic increase in the study area, 57% (5,420) is in Lea County, 31% (2,879) in Eddy County, and 12% (1082) in the Lake Arthur area. Barring any drastic change in the economy of the region, this surge in the Hispanic population will continue. It is also expected that the White Not Hispanic or Anglo population in the region will continue to lose ground due to either decline in their fertility and out-migration or a combination of both.

Overall, the Hispanic population made up 40% of the study area population. Other non-white races (American Indians, Blacks or African Americans, Asians, Hawaiians and Pacific Islanders, and those who identified themselves as Two or more

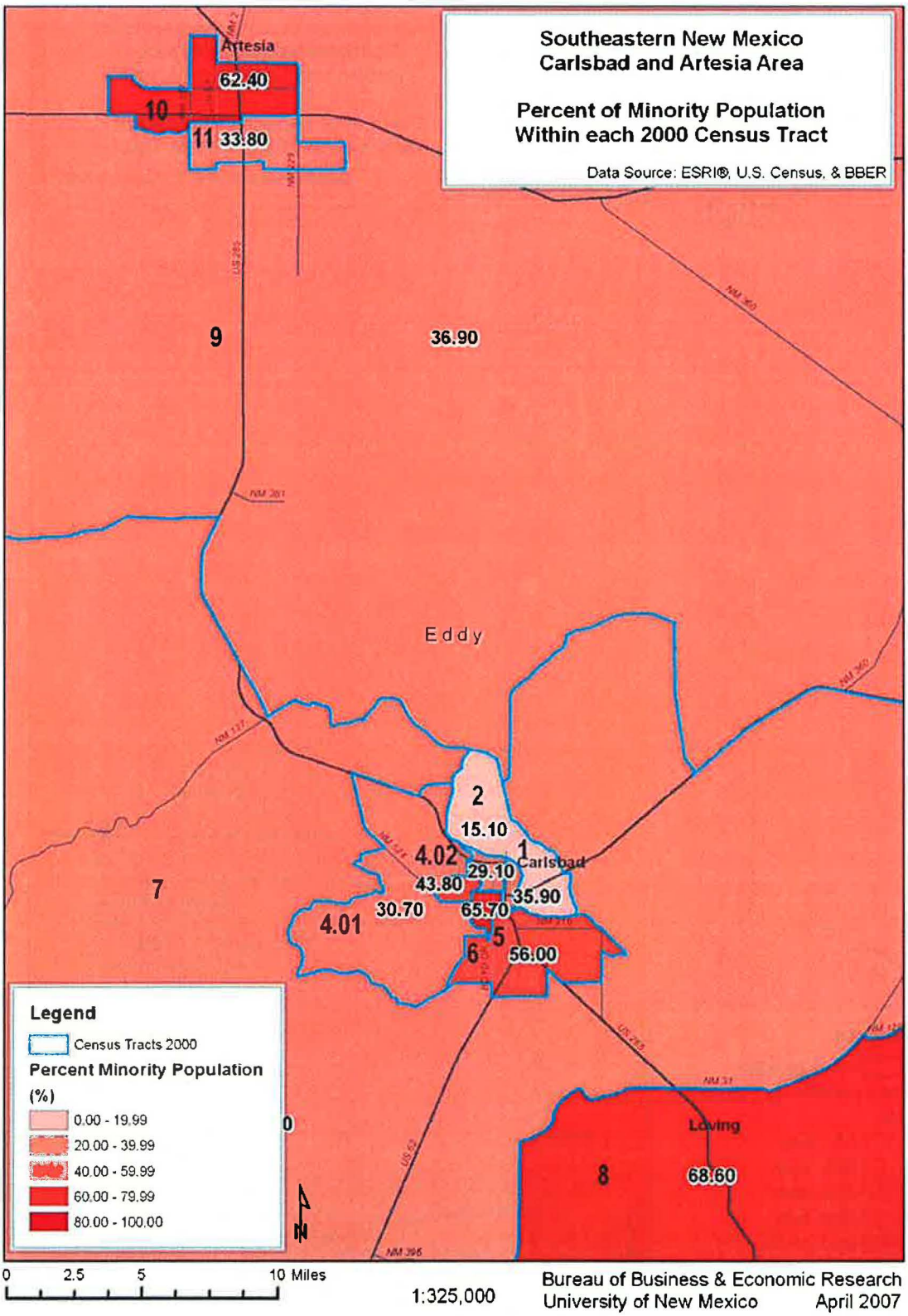
races) constitute four percent of the study area population. These two groups make up the 44% minority population in the region. The Lake Arthur region has the highest minority population with 56% (53% Hispanic). The next highest is Lea County with 45% (40% Hispanic). Eddy County (42% minority, 39% Hispanic) has the least proportion of minority population. At the Census Tract level, the areas with the highest proportion of Hispanic and minority population are, in descending order, the following: Lea County Census Tract 3, 79% (61% Hispanic); Lea County Census Tract 4, 79% (64% Hispanic); Lea County Census Tract 1, 70% (63% Hispanic); Eddy County Census Tract 8, 69% (67% Hispanic); and Eddy County Census Tract 5, 66% (62% Hispanic). The areas with the lowest minority and Hispanic population are, in descending order, the following: Eddy County Census Tract 4, 31% (27% Hispanic); Lea County Census Tract 7, 31% (25%); Eddy County Census Tract 3, 29% (26%); Lea County Census Tract 5.01, 22% (17%), and Eddy County Census Tract 2, 15% (12%). Map 12 to 14 indicates the geographic location of these minority populations. These maps illustrate that, in general, the Hispanic and minority population live primarily in or near urban areas. As will be evident in a subsequent section in this report, the minority and Hispanic population tend to be younger than the Anglo population. They also have a greater proportion of school aged children. Living in an urban area, where housing, jobs, schools, health and other services are concentrated is convenient, particularly for families that are just starting out, economically.

Figure 3 portends the growing minority trend in the study area population. The younger age groups are predominantly minority and Hispanic while the older age groups are primarily Anglos or White Not Hispanic. The minority population comprised approximately 60 percent of the population who were younger than 10 years old and greater than 50% among the 10-19 years old. Figure 3 shows a drastic decline in the minority share among the population older than 45 years old. Figures 4 to 6 and Tables 11 to 13 further underscore these age differentials

Map 12
Minority Population, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)



Map 13
Minority Population in Eddy County Urban Areas: Census 2000
(Source: Census 2000 Summary File 3)



37

Map 14
Minority Population in Lea county Urban Areas: Census 2000
(Source: Census 2000 Summary File 3)

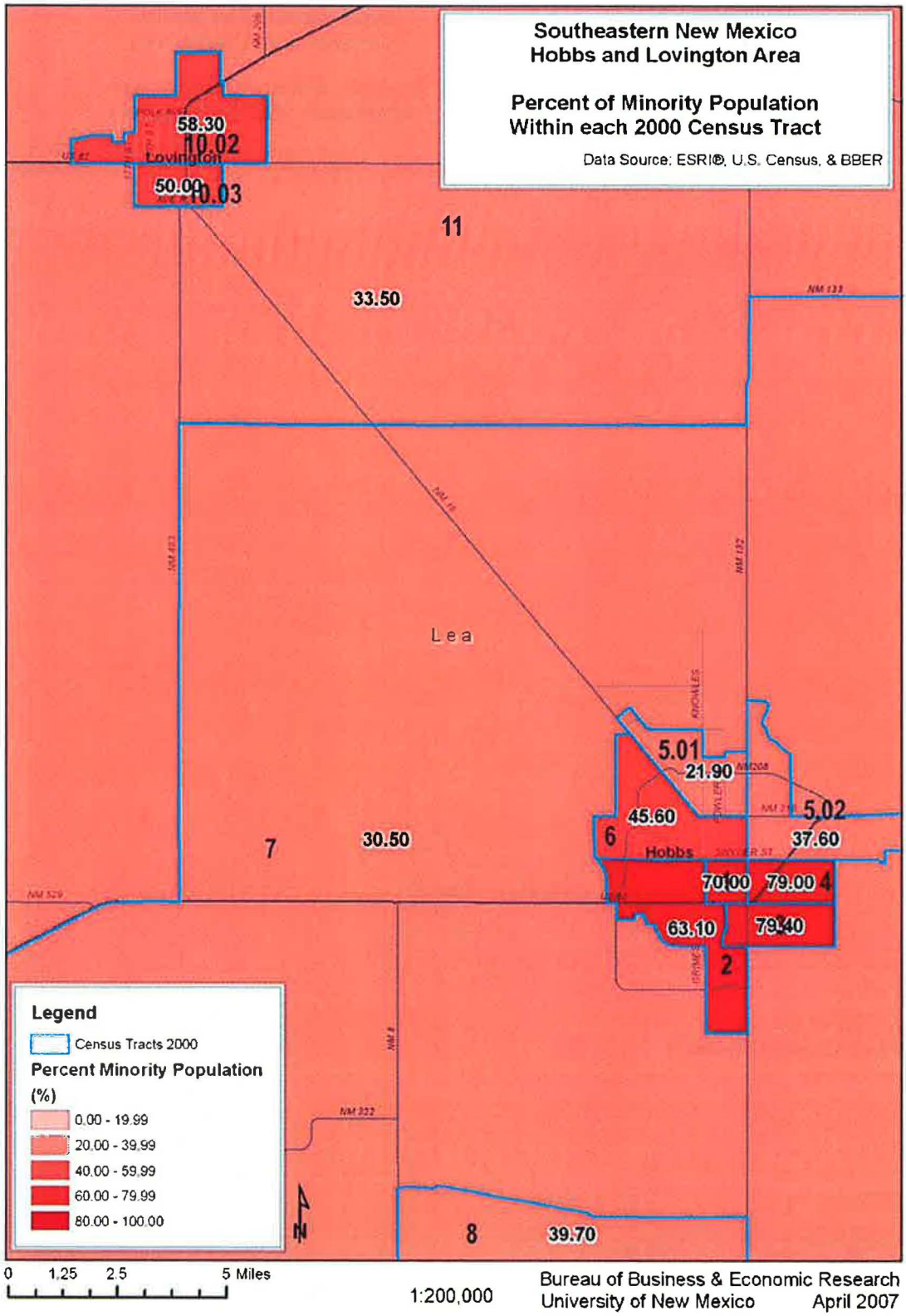
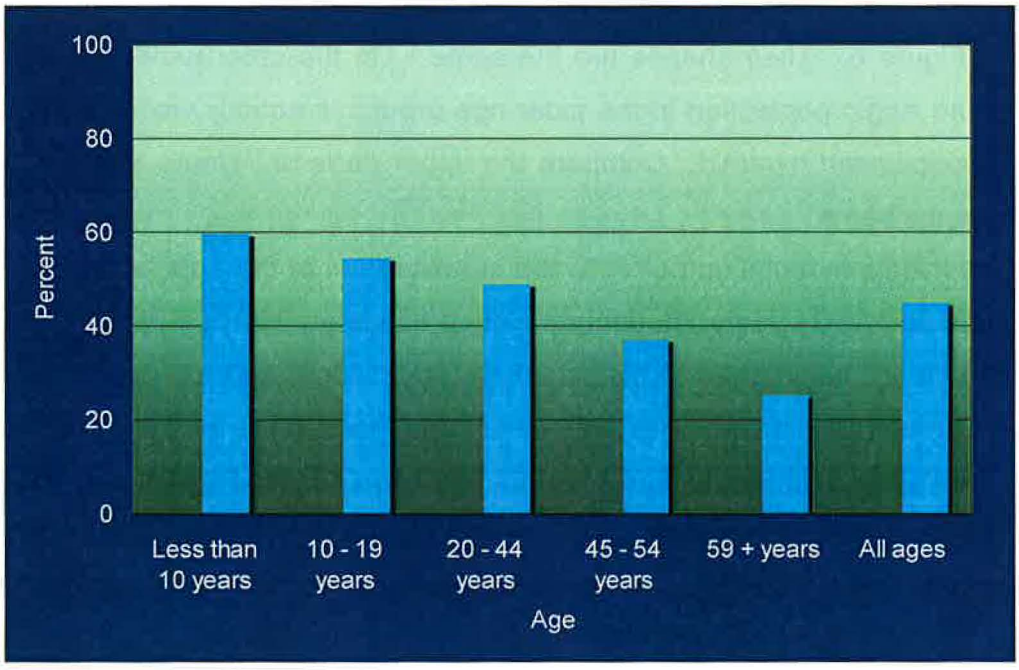


Figure 3
Study Area Minority Population by Age (In Percent): Census 2000
(Source: Census 2000 Summary File 1)



between Anglos and minority populations in the study area. At a glance, the population pyramids show that the minority population has a strong potential for growth. Its broad-based population pyramid indicates high fertility and/or the migration of very young children with their parents. By comparison, the Anglo population pyramid points to a slower population growth. The narrow and very constricted base of the Anglo population pyramid indicates that fertility among this population has been declining. Starting from 0-4 years ending with 15-19 years, notice that each successive bar is shorter than the one above it. In the absence of systematic out-migration, this incremental decrease in the bars corresponding to these age groups point to a consistent pattern of declining fertility during the last 15 years. Meanwhile, the minority population pyramid shows a nascent fertility decline. It is unclear whether this will become a trend; the 0-4 and 5-9 bars are virtually the same length albeit slightly shorter than the two bars above that correspond to the 10-14 years and 15-19 years.

The differential age structures between the Anglo and minority populations are also reflected in the shape of the study area total population pyramid. The predominance of the minority population in the younger ages is evident in the shape of the base of population pyramid. Compare the base of the population pyramid in Figure 4 to that of Figure 6. Their shapes are the same. On the other hand, the predominance of the Anglo population in the older age groups is equally visible in the study area total population pyramid. Compare the upper parts of Figures 4 and 5. Their shapes are the same.

The middle indentation points to the out-migration of the population from ages 20-24 years and 30-34 years. In general, young adults are highly migratory. But this tendency is more heightened in places where educational and job opportunities for these age groups are limited. The overall number of jobs in the area may be increasing but the young adult population may not have the necessary skill sets for these jobs or that these jobs are not attractive enough for this population. The depth of the groove in the Anglo population pyramid in these age groups indicates that young adults of this race have a greater inclination than their minority counterparts to seek better opportunities outside of the region.

Figure 4
Study Area Total Population Pyramid: Census 2000
(Source: Census 2000 Summary File 1)

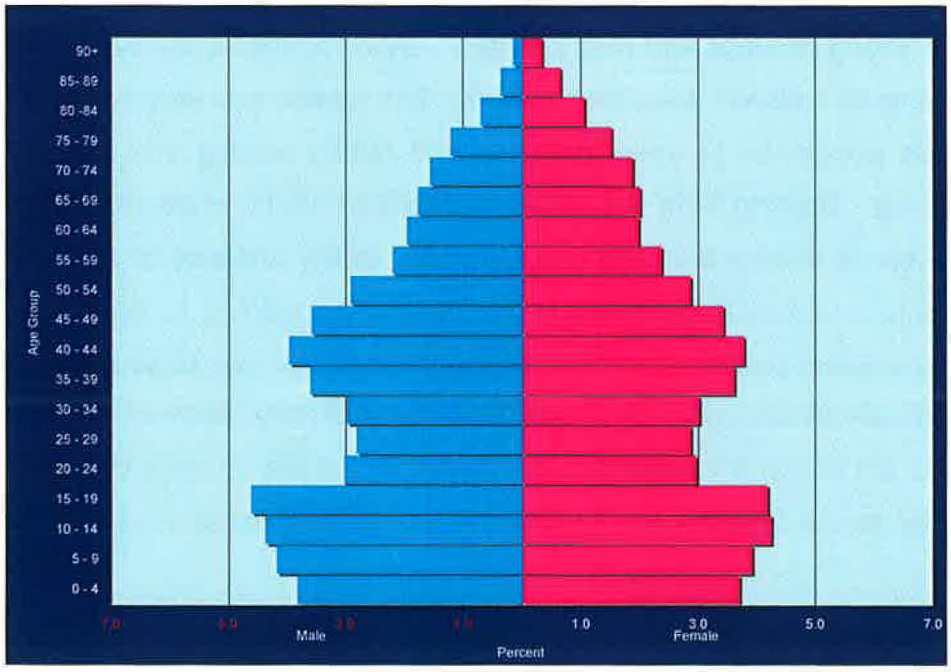


Figure 5
Study Area Anglo Population Pyramid: Census 2000
(Source: Census 2000 Summary File 1)

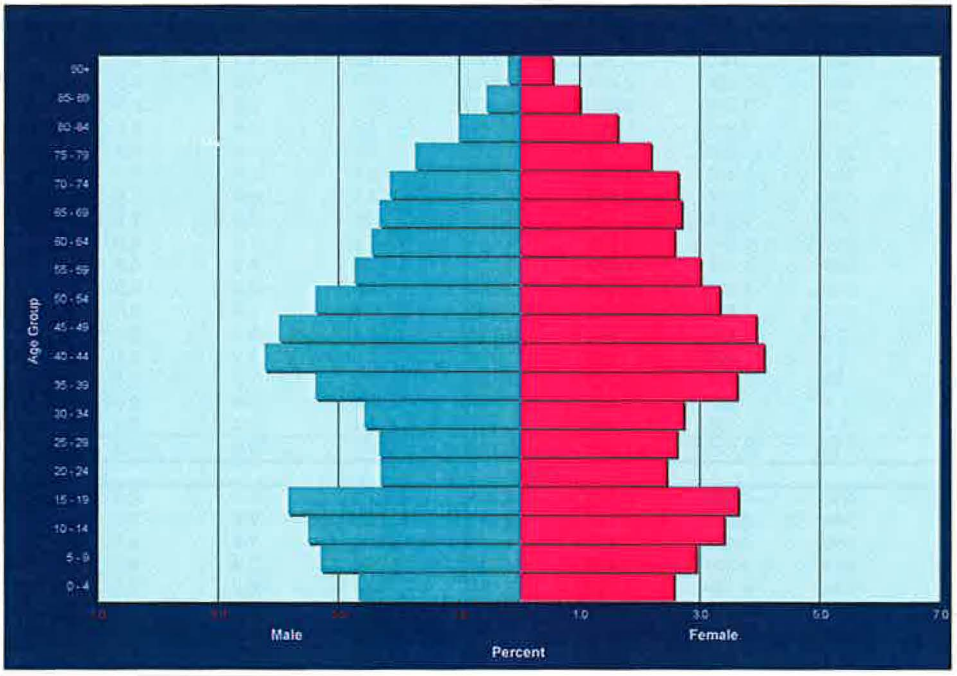


Figure 6
Study Area Minority Population Pyramid: Census 2000
(Source: Census 2000 Summary File 1)

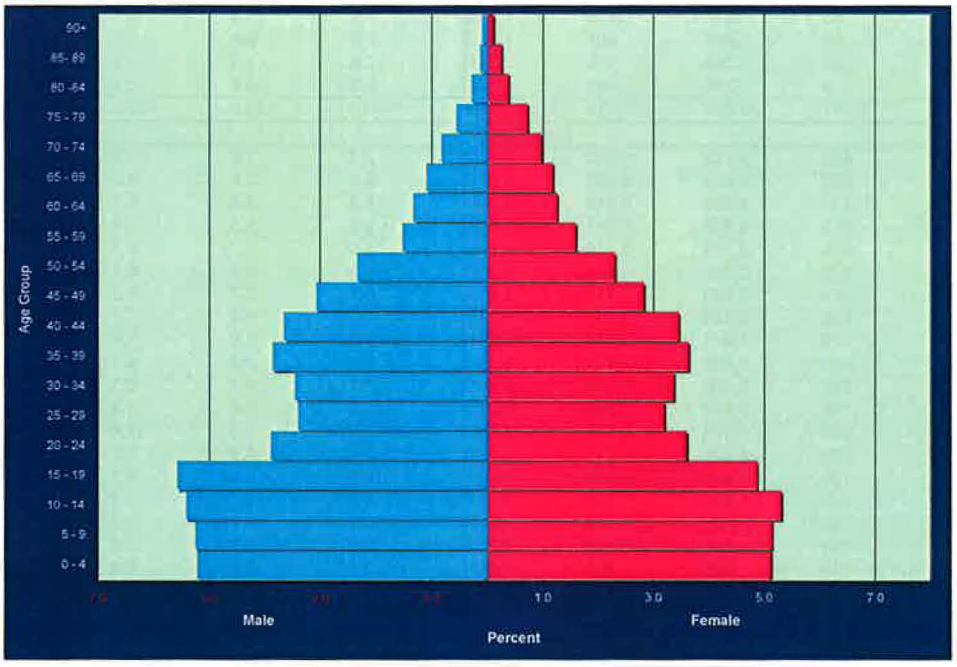


Table 11
Age-Sex Distribution of Study Area Total Population: Census 2000
(Source: Census 20000 Summary File 1)

Sex/Age	Frequency Distribution				Percent Distribution			
	Chaves County	Eddy County	Lea County	Study Area	Chaves County	Eddy County	Lea County	Study Area
Male								
0 - 4	307	1,911	2,148	4,366	8.3	7.6	7.7	7.7
5 - 9	359	2,090	2,320	4,769	9.7	8.3	8.3	8.4
10 - 14	387	2,180	2,423	4,990	10.4	8.6	8.7	8.8
15 - 19	379	2,258	2,638	5,275	10.2	8.9	9.5	9.3
20 - 24	176	1,360	1,913	3,449	4.7	5.4	6.9	6.1
25 - 29	211	1,263	1,732	3,206	5.7	5.0	6.2	5.6
30 - 34	204	1,434	1,756	3,394	5.5	5.7	6.3	6.0
35 - 39	290	1,708	2,115	4,113	7.8	6.8	7.6	7.2
40 - 44	301	2,043	2,192	4,536	8.1	8.1	7.9	8.0
45 - 49	248	1,945	1,898	4,091	6.7	7.7	6.8	7.2
50 - 54	199	1,597	1,532	3,328	5.4	6.3	5.5	5.9
60 - 64	161	1,023	1,045	2,229	4.3	4.0	3.8	3.9
65 - 69	131	950	943	2,024	3.5	3.8	3.4	3.6
70 - 74	99	844	842	1,785	2.7	3.3	3.0	3.1
75 - 79	71	721	586	1,378	1.9	2.9	2.1	2.4
80 - 84	33	427	322	782	0.9	1.7	1.2	1.4
85 - 89	9	235	163	407	0.2	0.9	0.6	0.7
90 +	4	106	57	167	0.1	0.4	0.2	0.3
All ages	3,710	25,291	27,795	56,796	100.0	100.0	100.0	100.0
Female								
0 - 4	246	1,882	2,105	4,233	7.1	7.1	7.6	7.4
5 - 9	334	2,009	2,137	4,480	9.6	7.6	7.7	7.8
10 - 14	350	2,088	2,420	4,858	10.0	7.9	8.7	8.4
15 - 19	334	2,046	2,403	4,783	9.6	7.8	8.7	8.3
20 - 24	179	1,399	1,797	3,375	5.1	5.3	6.5	5.9
25 - 29	167	1,437	1,667	3,271	4.8	5.4	6.0	5.7
30 - 34	264	1,509	1,663	3,436	7.6	5.7	6.0	6.0
35 - 39	265	1,881	1,989	4,135	7.6	7.1	7.2	7.2
40 - 44	277	1,998	2,050	4,325	7.9	7.6	7.4	7.5
45 - 49	234	1,880	1,807	3,921	6.7	7.1	6.5	6.8
50 - 54	183	1,571	1,517	3,271	5.2	6.0	5.5	5.7
55 - 59	172	1,311	1,220	2,703	4.9	5.0	4.4	4.7
60 - 64	125	1,050	1,082	2,257	3.6	4.0	3.9	3.9
65 - 69	127	1,077	1,087	2,291	3.6	4.1	3.9	4.0
70 - 74	94	1,036	1,014	2,144	2.7	3.9	3.7	3.7
75 - 79	66	895	778	1,739	1.9	3.4	2.8	3.0
80 - 84	32	683	497	1,212	0.9	2.6	1.8	2.1
85 - 89	29	399	319	747	0.8	1.5	1.2	1.3
90 +	9	216	164	389	0.3	0.8	0.6	0.7
All ages	3,487	26,367	27,716	57,570	100.0	100.0	100.0	100.0
Both Sexes								
0 - 4	553	3,793	4,253	8,599	7.7	7.3	7.7	7.5
5 - 9	693	4,099	4,457	9,249	9.6	7.9	8.0	8.1
10 - 14	737	4,268	4,843	9,848	10.2	8.3	8.7	8.6
15 - 19	713	4,304	5,041	10,058	9.9	8.3	9.1	8.8
20 - 24	355	2,759	3,710	6,824	4.9	5.3	6.7	6.0
25 - 29	378	2,700	3,399	6,477	5.3	5.2	6.1	5.7
30 - 34	468	2,943	3,419	6,830	6.5	5.7	6.2	6.0
35 - 39	555	3,589	4,104	8,248	7.7	6.9	7.4	7.2
40 - 44	578	4,041	4,242	8,861	8.0	7.8	7.6	7.7
45 - 49	482	3,825	3,705	8,012	6.7	7.4	6.7	7.0
50 - 54	382	3,168	3,049	6,599	5.3	6.1	5.5	5.8
55 - 59	313	2,507	2,390	5,210	4.3	4.9	4.3	4.6
60 - 64	286	2,073	2,127	4,486	4.0	4.0	3.8	3.9
65 - 69	258	2,027	2,030	4,315	3.6	3.9	3.7	3.8
70 - 74	193	1,880	1,856	3,929	2.7	3.6	3.3	3.4
75 - 79	137	1,616	1,364	3,117	1.9	3.1	2.5	2.7
80 - 84	65	1,110	819	1,994	0.9	2.1	1.5	1.7
85 - 89	38	634	482	1,154	0.5	1.2	0.9	1.0
90 +	13	322	221	556	0.2	0.6	0.4	0.5
All ages	7,197	51,658	55,511	114,366	100.0	100.0	100.0	100.0

Table 12
Age-Sex Distribution of Study Area Anglo Population: Census 2000
(Source: Census 2000 Summary File 1)

Sex/Age	Frequency Distribution				Percent Distribution			
	Chaves County	Eddy County	Lea County	Study Area	Chaves County	Eddy County	Lea County	Study Area
				Male				
0 - 4	107	803	774	1,684	6.6	5.6	5.3	5.5
5 - 9	124	992	956	2,072	7.7	6.9	6.5	6.8
10 - 14	123	1,049	1,035	2,207	7.6	7.3	7.1	7.2
15 - 19	139	1,103	1,169	2,411	8.6	7.7	8.0	7.9
20 - 24	64	625	763	1,452	4.0	4.4	5.2	4.7
25 - 29	87	651	721	1,459	5.4	4.5	4.9	4.8
30 - 34	81	715	822	1,618	5.0	5.0	5.6	5.3
35 - 39	109	918	1,100	2,127	6.7	6.4	7.5	7.0
40 - 44	145	1,244	1,268	2,657	9.0	8.7	8.7	8.7
45 - 49	137	1,198	1,172	2,507	8.5	8.4	8.0	8.2
50 - 54	111	1,020	997	2,128	6.9	7.1	6.8	7.0
60 - 64	94	723	725	1,542	5.8	5.0	4.9	5.0
65 - 69	75	658	728	1,461	4.6	4.6	5.0	4.8
70 - 74	60	627	668	1,355	3.7	4.4	4.6	4.4
75 - 79	48	552	491	1,091	3.0	3.9	3.4	3.6
80 - 84	21	347	268	636	1.3	2.4	1.8	2.1
85 - 89	6	194	142	342	0.4	1.4	1.0	1.1
90 +	3	78	41	122	0.2	0.5	0.3	0.4
All ages	1,616	14,327	14,648	30,591	100.0	100.0	100.0	100.0
				Female				
0 - 4	69	809	731	1,609	4.4	5.2	4.8	5.0
5 - 9	125	876	845	1,846	7.9	5.7	5.5	5.7
10 - 14	121	1,005	1,014	2,140	7.7	6.5	6.6	6.6
15 - 19	120	1,044	1,124	2,288	7.6	6.7	7.3	7.1
20 - 24	67	698	767	1,532	4.3	4.5	5.0	4.7
25 - 29	79	772	787	1,638	5.0	5.0	5.1	5.1
30 - 34	97	806	810	1,713	6.2	5.2	5.3	5.3
35 - 39	111	1,073	1,091	2,275	7.1	6.9	7.1	7.0
40 - 44	145	1,208	1,205	2,558	9.2	7.8	7.9	7.9
45 - 49	129	1,199	1,147	2,475	8.2	7.8	7.5	7.6
50 - 54	96	1,007	993	2,096	6.1	6.5	6.5	6.5
55 - 59	115	918	859	1,892	7.3	5.9	5.6	5.8
60 - 64	80	742	795	1,617	5.1	4.8	5.2	5.0
65 - 69	76	762	853	1,691	4.8	4.9	5.6	5.2
70 - 74	57	775	822	1,654	3.6	5.0	5.4	5.1
75 - 79	43	700	629	1,372	2.7	4.5	4.1	4.2
80 - 84	19	570	432	1,021	1.2	3.7	2.8	3.2
85 - 89	17	321	282	620	1.1	2.1	1.8	1.9
90 +	8	185	143	336	0.5	1.2	0.9	1.0
All ages	1,574	15,470	15,329	32,373	100.0	100.0	100.0	100.0
				Both Sexes				
0 - 4	176	1,612	1,505	3,293	5.5	5.4	5.0	5.2
5 - 9	249	1,868	1,801	3,918	7.8	6.3	6.0	6.2
10 - 14	244	2,054	2,049	4,347	7.6	6.9	6.8	6.9
15 - 19	259	2,147	2,293	4,699	8.1	7.2	7.6	7.5
20 - 24	131	1,323	1,530	2,984	4.1	4.4	5.1	4.7
25 - 29	166	1,423	1,508	3,097	5.2	4.8	5.0	4.9
30 - 34	178	1,521	1,632	3,331	5.6	5.1	5.4	5.3
35 - 39	220	1,991	2,191	4,402	6.9	6.7	7.3	7.0
40 - 44	290	2,452	2,473	5,215	9.1	8.2	8.2	8.3
45 - 49	266	2,397	2,319	4,982	8.3	8.0	7.7	7.9
50 - 54	207	2,027	1,990	4,224	6.5	6.8	6.6	6.7
55 - 59	197	1,748	1,667	3,612	6.2	5.9	5.6	5.7
60 - 64	174	1,465	1,520	3,159	5.5	4.9	5.1	5.0
65 - 69	151	1,420	1,581	3,152	4.7	4.8	5.3	5.0
70 - 74	117	1,402	1,490	3,009	3.7	4.7	5.0	4.8
75 - 79	91	1,252	1,120	2,463	2.9	4.2	3.7	3.9
80 - 84	40	917	700	1,657	1.3	3.1	2.3	2.6
85 - 89	23	515	424	962	0.7	1.7	1.4	1.5
90 +	11	263	184	458	0.3	0.9	0.6	0.7
All ages	3,190	29,797	29,977	62,964	100.0	100.0	100.0	100.0

Table 13
Age-Sex Distribution of Study Area Minority Population: Census 2000
(Source: Census 2000 summary File 1)

Sex/Age	Frequency Distribution				Percent Distribution			
	Chaves County	Eddy County	Lea County	Study Area	Chaves County	Eddy County	Lea County	Study Area
Male								
0 - 4	200	1,108	1,374	2,682	9.6	10.1	10.5	10.2
5 - 9	235	1,098	1,364	2,697	11.2	10.0	10.4	10.3
10 - 14	264	1,131	1,388	2,783	12.6	10.3	10.6	10.6
15 - 19	240	1,155	1,469	2,864	11.5	10.5	11.2	10.9
20 - 24	112	735	1,150	1,997	5.3	6.7	8.7	7.6
25 - 29	124	612	1,011	1,747	5.9	5.6	7.7	6.7
30 - 34	123	719	934	1,776	5.9	6.6	7.1	6.8
35 - 39	181	790	1,015	1,986	8.6	7.2	7.7	7.6
40 - 44	156	799	924	1,879	7.4	7.3	7.0	7.2
45 - 49	111	747	726	1,584	5.3	6.8	5.5	6.0
50 - 54	88	577	535	1,200	4.2	5.3	4.1	4.6
60 - 64	67	300	320	687	3.2	2.7	2.4	2.6
65 - 69	56	292	215	563	2.7	2.7	1.6	2.1
70 - 74	39	217	174	430	1.9	2.0	1.3	1.6
75 - 79	23	169	95	287	1.1	1.5	0.7	1.1
80 - 84	12	80	54	146	0.6	0.7	0.4	0.6
85 - 89	3	41	21	65	0.1	0.4	0.2	0.2
90 +	1	28	16	45	0.0	0.3	0.1	0.2
All ages	2,094	10,964	13,147	26,205	100.0	100.0	100.0	100.0
Female								
0 - 4	177	1,073	1,374	2,624	9.3	9.8	11.1	10.4
5 - 9	209	1,133	1,292	2,634	10.9	10.4	10.4	10.5
10 - 14	229	1,083	1,406	2,718	12.0	9.9	11.4	10.8
15 - 19	214	1,002	1,279	2,495	11.2	9.2	10.3	9.9
20 - 24	112	701	1,030	1,843	5.9	6.4	8.3	7.3
25 - 29	88	665	880	1,633	4.6	6.1	7.1	6.5
30 - 34	167	703	853	1,723	8.7	6.5	6.9	6.8
35 - 39	154	808	898	1,860	8.1	7.4	7.2	7.4
40 - 44	132	790	845	1,767	6.9	7.2	6.8	7.0
45 - 49	105	681	660	1,446	5.5	6.2	5.3	5.7
50 - 54	87	564	524	1,175	4.5	5.2	4.2	4.7
55 - 59	57	393	361	811	3.0	3.6	2.9	3.2
60 - 64	45	308	287	640	2.4	2.8	2.3	2.5
65 - 69	51	315	234	600	2.7	2.9	1.9	2.4
70 - 74	37	261	192	490	1.9	2.4	1.6	1.9
75 - 79	23	195	149	367	1.2	1.8	1.2	1.5
80 - 84	13	113	65	191	0.7	1.0	0.5	0.8
85 - 89	12	78	37	127	0.6	0.7	0.3	0.5
90 +	1	31	21	53	0.1	0.3	0.2	0.2
All ages	1,913	10,897	12,387	25,197	100.0	100.0	100.0	100.0
Both Sexes								
0 - 4	377	2,181	2,748	5,306	9.4	10.0	10.8	10.3
5 - 9	444	2,231	2,656	5,331	11.1	10.2	10.4	10.4
10 - 14	493	2,214	2,794	5,501	12.3	10.1	10.9	10.7
15 - 19	454	2,157	2,748	5,359	11.3	9.9	10.8	10.4
20 - 24	224	1,436	2,180	3,840	5.6	6.6	8.5	7.5
25 - 29	212	1,277	1,891	3,380	5.3	5.8	7.4	6.6
30 - 34	290	1,422	1,787	3,499	7.2	6.5	7.0	6.8
35 - 39	335	1,598	1,913	3,846	8.4	7.3	7.5	7.5
40 - 44	288	1,589	1,769	3,646	7.2	7.3	6.9	7.1
45 - 49	216	1,428	1,386	3,030	5.4	6.5	5.4	5.9
50 - 54	175	1,141	1,059	2,375	4.4	5.2	4.1	4.6
55 - 59	116	759	723	1,598	2.9	3.5	2.8	3.1
60 - 64	112	608	607	1,327	2.8	2.8	2.4	2.6
65 - 69	107	607	449	1,163	2.7	2.8	1.8	2.3
70 - 74	76	478	366	920	1.9	2.2	1.4	1.8
75 - 79	46	364	244	654	1.1	1.7	1.0	1.3
80 - 84	25	193	119	337	0.6	0.9	0.5	0.7
85 - 89	15	119	58	192	0.4	0.5	0.2	0.4
90 +	2	59	37	98	0.0	0.3	0.1	0.2
All ages	4,007	21,861	25,534	51,402	100.0	100.0	100.0	100.0

Overall, Figure 4 shows that, regardless of race and ethnicity, these young adults, who are newly coming on their own in the labor market, are disproportionately underrepresented in the study area population. Whether or not the higher price of oil and gas products will generate enough jobs to retain these peripatetic young adults remains to be seen.

Migration Status of Residents and Workers

This section will examine the migration status of both residents and workers. The data for the migration status of residents were based on the response to the Census 2000 question on place of residence five years prior to April 1, 2000, the cut-off date for Census 2000. The data for migration of workers were based on the response to the inquiry regarding their place of work. Data for workers were collected for every resident who was 16 years or older at the time the Census. The data for residents as well as workers were extracted from the Census 2000 Summary File 3.

Tables 14 and 15 summarize the migration status of the study area population aged five years and older in 2000. These tables show the distribution of the region's population according to their place of residence five years prior to the Census. Over 60,000 (56%) of the study area residents never moved at all. They lived in the same house five years before the Census. Over a quarter or 28,000 people lived in a different house within the county; five percent (5,620 people) were from another New Mexico county; nine percent (9,640 people) were from another US state and a very small proportion (1.2%, 1,310 people) were from a foreign country. Lea County had the highest proportion migrants from outside New Mexico. Exactly 11% (9.5% other US and 2.5% foreign migrants) of Lea County residents in 2000 came from outside the state. Chaves County (10.5%) and Eddy County (9.6%) had about equal proportions of migrants from outside the state.

A more detailed analysis of the migrant or mover population in the study area shows that close to 35,000 people (75.4%) were from the state of New Mexico; only a quarter (10,950 people) were from another state or a foreign country. Table 16 summarizes the migrant data for the study area. Of the intrastate or movers within New Mexico, 83% stayed in the same county but they moved to a different house

within the county. Only 17% migrated from another New Mexico county. At the county level, Table 17 shows that Lea County (84.9%) had the highest proportion of intracounty or within county movers, followed by Eddy County (82.3%), and Lake Arthur area (77.5%).

Among interstate or migrants from another state or a foreign country, exactly 88% was from another state in the US and 12% was from a foreign county. At the county level, 93% of the interstate migrants in Eddy County was from another US state; in Lea County, 87%; and in Lake Arthur, 70%. Table 15 also shows that among interstate movers at the county level, the Lake Arthur area (30.2%) had the highest proportion of foreign migrants; Lea County (13.5%) had second highest and Eddy County (7.3%) had the lowest.

The Census Tract figures presented in Tables 17 are also shown in Maps 15 to 17. These maps place the geographic destination of these migrants at the Census Tract Level and they show that interstate migrants tended to move to an urban area but not necessarily in the urban core. Census Tracts outside the boundaries of the city appeared to be the major destination of these out-of-state migrants. The only apparent exception to this pattern is in the Lake Arthur area, where the darkest shade is in the city of Lake Arthur (Census Tract 14).

This section also examines the commuting behavior of workers in the region. Table 18 shows that approximately 43,000 study area residents reported that they were working for pay in 2000. Virtually all workers (97.3%) aged 16 years and older in the study area had a job within the state of New Mexico. Only a small fraction (2.7%) commuted to another state. Lea County had the highest proportion (4.2%) of out-of-state commuters. Lake Arthur had only 1% and Eddy County had 1.5% of its workers who commuted to another state. Table 15 further indicates that among those who worked in state, 97% worked in their own county of residence. Workers in Eddy County and Lea County had a similar pattern as the study area; approximately 97% worked in Eddy County while 98% worked in Lea County. The Lake Arthur (12.6%) area had the highest proportion of workers that commuted to work in another New Mexico county.

Table 14
Migrant Status of Five Year Old and Older Study Area Residents: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Different House	Total Migrants from

Table 15
Migration Status of Five Year Old and Older Study Area Residents: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	NonMovers (Same House)	Different House, Same County	Different New Mexico County	Other US State	Foreign Country	Total Migrants from Outside County	Total Migrants
Chaves County	**55.6**	**25.9**	**6.5**	**10.3**	**1.7**	**12.0**	**100.0**
Census Tract 12	61.8	24.5	2.4	8.4	3.0	13.8	100.0
Census Tract 13	59.4	25.7	5.7	6.6	2.5	14.8	100.0
Census Tract 14	61.3	16.9	10.3	7.5	4.1	21.8	100.0
Total	**60.7**	**22.3**	**6.5**	**7.3**	**3.2**	**10.5**	**100.0**
Eddy County							
Census Tract 1	55.3	25.5	5.6	12.4	1.3	19.3	100.0
Census Tract 2	60.9	21.8	7.2	9.2	0.9	17.3	100.0
Census Tract 3	49.5	33.3	6.4	9.2	1.6	17.2	100.0
Census Tract 4.01	58.5	22.7	6.4	12.2	0.3	18.8	100.0
Census Tract 4.02	61.1	25.2	4.6	8.6	0.5	13.7	100.0
Census Tract 5	64.7	26.1	2.9	5.6	0.6	9.1	100.0
Census Tract 6	61.6	21.9	5.7	10.3	0.5	16.5	100.0
Census Tract 7	58.0	29.4	3.5	9.0	0.0	12.6	100.0
Census Tract 8	72.1	20.0	1.8	5.5	0.6	7.9	100.0
Census Tract 9	58.5	24.0	6.3	9.6	1.7	17.5	100.0
Census Tract 10	56.2	29.0	7.7	6.3	0.7	14.8	100.0
Census Tract 11	59.7	25.3	5.5	9.6	0.0	15.0	100.0
Total	**59.0**	**25.8**	**5.6**	**8.9**	**0.7**	**9.6**	**100.0**
Lea County							
Census Tract 1	45.0	34.1	7.2	10.5	3.2	20.9	100.0
Census Tract 2	52.4	32.2	5.5	9.7	0.2	15.4	100.0
Census Tract 3	61.6	28.3	2.4	6.7	0.9	10.0	100.0
Census Tract 4	46.6	40.2	1.6	10.1	1.4	13.2	100.0
Census Tract 5.01	49.4	33.7	4.8	11.4	0.7	16.9	100.0
Census Tract 5.02	51.2	33.7	4.4	10.5	0.2	15.1	100.0
Census Tract 6	59.0	26.5	6.2	7.4	0.9	14.5	100.0
Census Tract 7	51.5	22.5	9.7	12.1	4.2	26.0	100.0
Census Tract 8	62.1	24.8	1.9	9.9	1.4	13.1	100.0
Census Tract 9	66.7	21.9	1.9	9.4	0.2	11.4	100.0
Census Tract 10.02	64.5	22.0	4.7	6.2	2.5	13.5	100.0
Census Tract 10.03	57.9	27.6	2.2	11.6	0.6	14.5	100.0
Census Tract 11	69.2	19.7	3.3	7.5	0.3	11.1	100.0
Total	**56.5**	**27.6**	**4.9**	**9.5**	**1.5**	**11.0**	**100.0**
Study Area	**57.9**	**26.5**	**5.3**	**9.1**	**1.2**	**10.3**	**100.0**

Table 16
Migrants by Place of Residence 5 Years Prior to Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Different House, Same County	Different New Mexico County	Intrastate Migrants	Other US State	Foreign Country	Interstate & Foreign Migrants	Total Migrants
Frequency Distribution							
Chaves County	***14,763***	***3,723***	***18,486***	***5,869***	***955***	***6,824***	***25,310***
Census Tract 12	401	40	441	137	49	186	627
Census Tract 13	690	153	843	177	68	245	1,088
Census Tract 14	391	237	628	173	94	267	895
Total	**1,482**	**430**	**1,912**	**487**	**211**	**698**	**2,610**
Eddy County							
Census Tract 1	353	77	430	172	18	190	620
Census Tract 2	942	310	1,252	395	40	435	1,687
Census Tract 3	1,683	322	2,005	465	83	548	2,553
Census Tract 4.01	765	214	979	411	10	421	1,400
Census Tract 4.02	1,007	183	1,190	345	19	364	1,554
Census Tract 5	801	89	890	172	19	191	1,081
Census Tract 6	1,095	285	1,380	514	27	541	1,921
Census Tract 7	1,362	163	1,525	419	0	419	1,944
Census Tract 8	383	35	418	105	11	116	534
Census Tract 9	988	259	1,247	394	69	463	1,710
Census Tract 10	1,582	422	2,004	345	40	385	2,389
Census Tract 11	1,425	308	1,733	539	0	539	2,272
Total	**12,386**	**2,667**	**15,053**	**4,276**	**336**	**4,612**	**19,665**
Lea County							
Census Tract 1	738	156	894	227	70	297	1,191
Census Tract 2	883	150	1,033	265	6	271	1,304
Census Tract 3	869	73	942	207	28	235	1,177
Census Tract 4	892	36	928	225	31	256	1,184
Census Tract 5.01	1,918	276	2,194	646	41	687	2,881
Census Tract 5.02	1,705	223	1,928	532	9	541	2,469
Census Tract 6	1,444	337	1,781	402	51	453	2,234
Census Tract 7	1,666	718	2,384	897	309	1,206	3,590
Census Tract 8	664	50	714	265	37	302	1,016
Census Tract 9	438	37	475	187	3	190	665
Census Tract 10.02	1,269	271	1,540	360	146	506	2,046
Census Tract 10.03	914	73	987	385	21	406	1,393
Census Tract 11	737	123	860	279	11	290	1,150
Total	**14,137**	**2,523**	**16,660**	**4,877**	**763**	**5,640**	**22,300**
Study Area	**28,005**	**5,620**	**33,625**	**9,640**	**1,310**	**10,950**	**44,575**

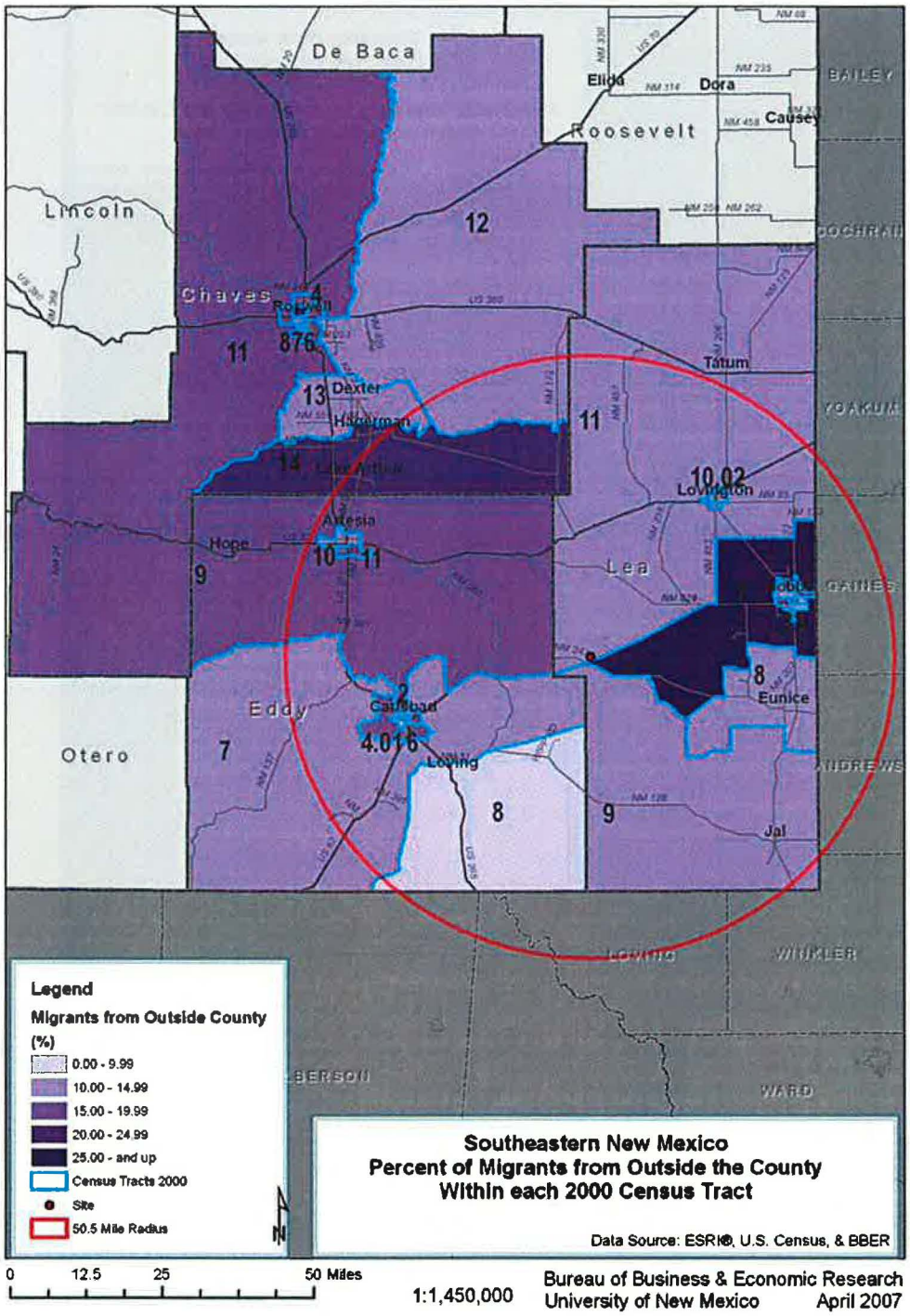
Table 17
Distribution of Migrants, by Residence 5 Yeas Prior to Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Different House, Same County	Different New Mexico County	Intrastate Migrants	Other US State	Foreign Country	Interstate Migrants	Total Migrants
Percent Distribution							
Chaves County	***14,763***	***3,723***	***73.0***	***86.0***	***3.8***	***27.0***	***100.0***
Census Tract 12	90.9	9.1	70.3	73.7	26.3	29.7	100.0
Census Tract 13	81.9	18.1	77.5	72.2	27.8	22.5	100.0
Census Tract 14	62.3	37.7	70.2	64.8	35.2	29.8	100.0
Total	**77.5**	**22.5**	**73.3**	**69.8**	**30.2**	**26.7**	**100.0**
Eddy County							
Census Tract 1	82.1	17.9	69.4	90.5	9.5	30.6	100.0
Census Tract 2	75.2	24.8	74.2	90.8	9.2	25.8	100.0
Census Tract 3	83.9	16.1	78.5	84.9	15.1	21.5	100.0
Census Tract 4.01	78.1	21.9	69.9	97.6	2.4	30.1	100.0
Census Tract 4.02	84.6	15.4	76.6	94.8	5.2	23.4	100.0
Census Tract 5	90.0	10.0	82.3	90.1	9.9	17.7	100.0
Census Tract 6	79.3	20.7	71.8	95.0	5.0	28.2	100.0
Census Tract 7	89.3	10.7	78.4	100.0	0.0	21.6	100.0
Census Tract 8	91.6	8.4	78.3	90.5	9.5	21.7	100.0
Census Tract 9	79.2	20.8	72.9	85.1	14.9	27.1	100.0
Census Tract 10	78.9	21.1	83.9	89.6	10.4	16.1	100.0
Census Tract 11	82.2	17.8	76.3	100.0	0.0	23.7	100.0
Total	**82.3**	**17.7**	**76.5**	**92.7**	**7.3**	**23.5**	**100.0**
Lea County							
Census Tract 1	82.6	17.4	75.1	76.4	23.6	24.9	100.0
Census Tract 2	85.5	14.5	79.2	97.8	2.2	20.8	100.0
Census Tract 3	92.3	7.7	80.0	88.1	11.9	20.0	100.0
Census Tract 4	96.1	3.9	78.4	87.9	12.1	21.6	100.0
Census Tract 5.01	87.4	12.6	76.2	94.0	6.0	23.8	100.0
Census Tract 5.02	88.4	11.6	78.1	98.3	1.7	21.9	100.0
Census Tract 6	81.1	18.9	79.7	88.7	11.3	20.3	100.0
Census Tract 7	69.9	30.1	66.4	74.4	25.6	33.6	100.0
Census Tract 8	93.0	7.0	70.3	87.7	12.3	29.7	100.0
Census Tract 9	92.2	7.8	71.4	98.4	1.6	28.6	100.0
Census Tract 10.02	82.4	17.6	75.3	71.1	28.9	24.7	100.0
Census Tract 10.03	92.6	7.4	70.9	94.8	5.2	29.1	100.0
Census Tract 11	85.7	14.3	74.8	96.2	3.8	25.2	100.0
Total	**84.9**	**15.1**	**74.7**	**86.5**	**13.5**	**25.3**	**100.0**
Study Area	**83.3**	**16.7**	**75.4**	**88.0**	**12.0**	**24.6**	**100.0**

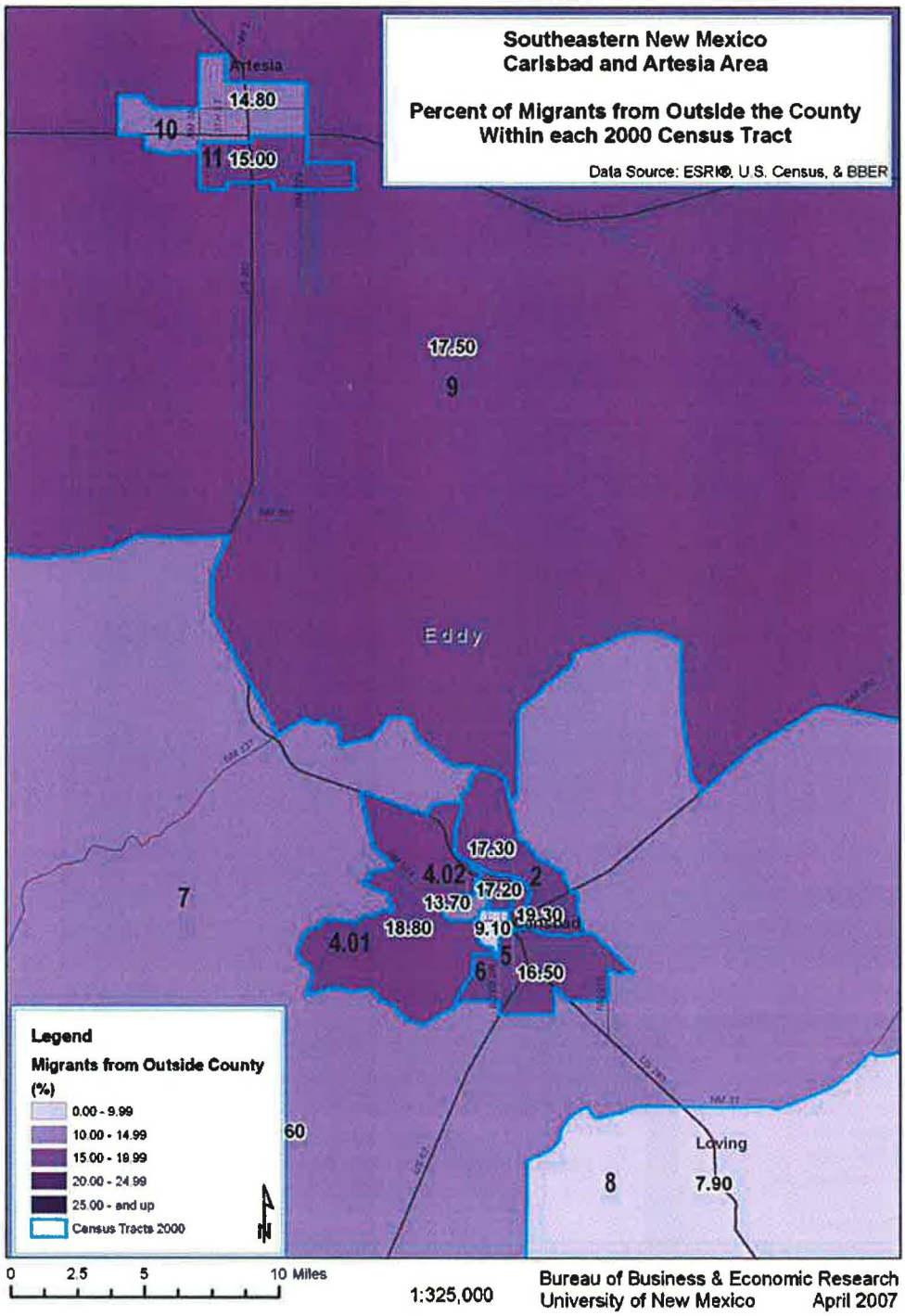
Table 18
Migration Status of Workers Aged 16 and Over in Study Area: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	In State of Residence			Outside State of Residence	Total
	In County of Residence	In State Outside of County of Residence	Total In State		
Frequency Distribution					
Lake Arthur Area	2,330	336	***2,666***	27	2,693
Eddy County	19,236	637	***19,873***	312	20,185
Lea County	18,566	435	***19,001***	827	19,828
Study Area	**40,132**	**1,408**	***41,540***	**1,166**	**42,706**
Percent Distribution					
Lake Arthur Area	87.4	12.6	***99.0***	1.0	100.0
Eddy County	96.8	3.2	***98.5***	1.5	100.0
Lea County	97.7	2.3	***95.8***	4.2	100.0
Study Area	**96.6**	**3.4**	***97.3***	**2.7**	**100.0**

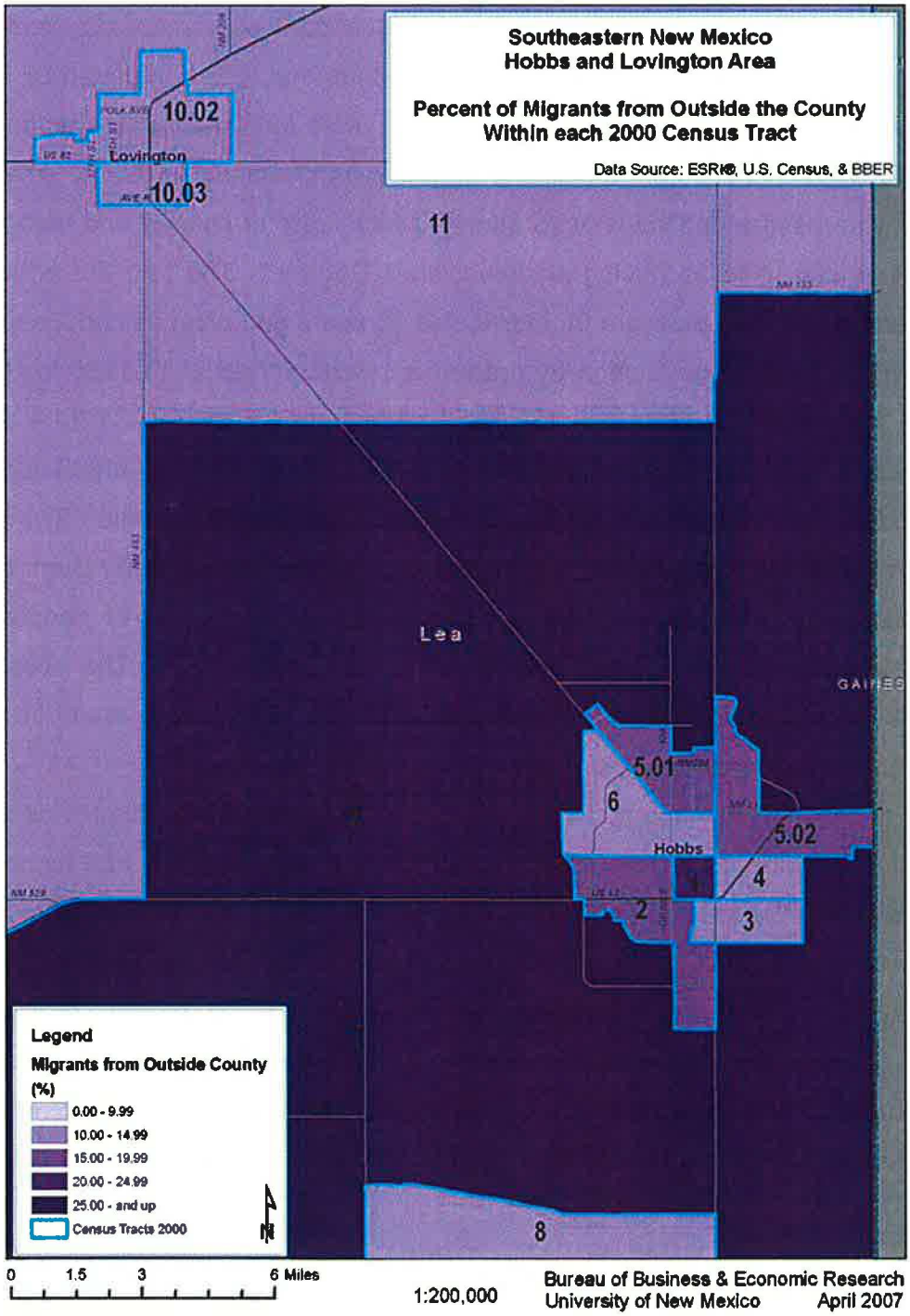
Map 15
Destination of Interstate Migrants in Study Area
(Source : Census 2000 Summary File 3)



Map 16
Interstate Migrant Destination in Carlsbad and Artesia
(Source: Census 2000 Summary File 3)



Map 17
Interstate Migrant Destination in Hobbs and Lovington
(Source: Census 2000 Summary File 3)



Socio-economic Characteristics.

This section investigates the socio-economic characteristics of the study area residents. Including in the analyses are educational attainment, school enrollment, and poverty status of the resident population. Educational attainment as used in the Census 2000 refers to the highest level of schooling that was completed by an individual. For example, the educational attainment of an individual who attended three years of college but did not complete a degree was classified as "some college, no degree," whereas, an individual who attended two years of college and completed a degree was classified as having an Associate's Degree." The data for educational attainment presented below are for individuals 18 years and older. School enrollment data cover the school population by grade from School Year (SY) 1986 to SY2005. Data on the minority student population by grade from SY1989 to SY2004 are also presented in this segment of the report. The data on school enrollment were downloaded from the National Center for Education Statistics website. The poverty status of the resident population was extracted from the Census 2000 Summary File 3. The poverty rate varies by household income and number of people in the household and this was estimated for the household population. The poverty rate was not calculated for group quarters population or those who were in nursing homes, prisons, dormitories, etc.

Educational Attainment. Tables 19 and 20 and Maps 18 to 20 provide detailed distribution of study area resident population by sex, census tract, and highest level of educational attainment. Table 19 shows that of the 75,000 people who were 18 years and older in 2000, over 37,000 or 52% had a high school diploma. Approximately 13,000 or 17% had at least an Associate's Degree. In general, women in the study area were more educated than men. Over 70% of the women reported that they completed at least a high school education. The comparative figure for men is 65%. However, an equal proportion of men (17.3%) and women (17.2%) had a college degree.

Table 19
Highest Educational Attainment of Study Area Population
Aged 18 Years and Older
(Source: Census 20000 Summary File 3)

Study Area	Male	Female	Both Sexes
Frequency Distribution			
Less than HS	11,931	11,806	23,737
HS grad and some college	16,810	21,596	38,406
College Degree	6,030	6,935	12,965
Total	**34,771**	**40,337**	**75,108**
Percent Distribution			
Less than HS	34.3	29.3	31.6
HS grad and some college	48.3	53.5	51.1
College Degree	17.3	17.2	17.3
Total	**100.0**	**100.0**	**100.0**

Tables 20 and 21 further disaggregate the education statistics into the sex, educational attainment, and census tract. Table 20 indicates that of the 13,000 individuals with college degrees, 6,300 were in Eddy County; 6,000 were In Lea County and 700 in Lake Arthur. The largest concentration of individuals with a high school diploma or some college was in Eddy County. Approximately 20,000 of Eddy County's population aged 18 years and older had a high school diploma or higher. The corresponding figure for Lea County is 17,000 and for Lake Arthur, 700 individuals. Table 21 shows that in relative terms, Lake Arthur had the highest proportion, 41%, of individuals with less than a high school education; Lea County had the second highest with 35%; Eddy County had 27%. In all three counties, women had a higher educational attainment than men. In Eddy County, one quarter of the women had less than a high school education compared to 30% of the men. Men in In Lea County were likewise at a comparative disadvantage eucationwise; 34% of the men did not complete a high school education compare to 29% of the women. In Lake Arthur, the breakdown

in this lowest educational attainment category was 38% women versus 44% men. Among those with college degrees, very little difference between the genders was noted. In Eddy County, 19% of the men compared to 17% of the women had a college degree. In Lea County, the comparable figures are men, 16%, and women, 18%, while in Lake Arthur an equal proportion, 15%, of men and women completed a college degree.

At the Census Tract level, education differentials are wide-ranging. Table 21 shows a total of nine Census Tracts where at least 40% of the 18 years old and over population had no high school education. Two are in Lake Arthur; one in Eddy County; and six in Lea County. All nine are in the city limits.

Table 20
Educational Attainment, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Males				Females				Both Sexes			
	Less than HS	HS grad and some college	College Degree	Total	Less than HS	HS grad and some college	College Degree	Total	Less than HS	HS grad and some college	College Degree	Total
Eddy County												
Census Tract 1	136	248	84	468	116	328	125	569	252	576	209	1,037
Census Tract 2	201	707	676	1,584	236	1,015	618	1,869	437	1,722	1,294	3,453
Census Tract 3	338	976	351	1,665	380	1,297	561	2,238	718	2,273	912	3,903
Census Tract 4.01	219	562	277	1,058	250	934	246	1,430	469	1,496	523	2,488
Eddy County	347	29.2	714	50.3	155	20.4	1,216	100.0	413	28.6	1,020	52.0	217	19.4	1,650	100.0	760	28.9	1,734	51.2	372	19.9	2,866	100.0
Census Tract 12	413	35.9	483	42.2	107	21.9	1,003	100.0	444	37.0	698	45.8	98	17.2	1,240	100.0	857	36.4	1,181	44.1	205	19.5	2,243	100.0
Census Tract 6	608	45.0	887	40.9	165	14.0	1,660	100.0	674	38.6	1,073	46.7	221	14.7	1,968	100.0	1,282	41.8	1,960	43.9	386	14.4	4,628	100.0
Census Tract 7	425	51.0	965	38.1	219	10.9	1,609	100.0	288	37.5	1,087	47.4	302	15.1	1,677	100.0	713	43.8	2,052	43.0	521	13.1	3,286	100.0
Census Tract 8	287	44.6	303	40.3	54	15.0	644	100.0	242	37.8	383	46.7	59	15.5	684	100.0	529	41.1	686	43.6	113	15.3	1,328	100.0
Census Tract 9	510		664		269		1,443		385		847		204		1,432		891		1,511		473		2,875	
Census Tract 10	622		624		151		1,797		685		1,013		242		2,140		1,707		1,637		393		3,937	
Census Tract 11	469	12.7	912	44.6	425	42.7	1,806	100.0	560	12.6	1,402	54.3	366	33.1	2,328	100.0	1,029	12.7	2,314	49.0	791	37.5	4,134	100.0
Total	4,775	20.3	8,185	55.0	2,993	24.7	15,953	100.0	4,869	17.0	11,097	58.0	3,259	25.1	19,225	100.0	9,644	18.7	19,282	56.7	6,252	24.5	35,178	100.0
Census Tract 4.01		20.7		53.1		26.2		100.0				65.3		17.2		100.0		18.9		60.1		21.0		100.0
Census Tract 4.02	385	28.5	287	58.7	47	12.7	719	100.0	386	25.0	361	61.8	98	13.2	845	100.0	771	26.5	648	60.5	145	13.0	1,564	100.0
Census Tract 5	547	41.2	260	48.2	100	10.7	907	100.0	576	35.8	410	56.3	80	7.9	1,066	100.0	1,123	38.2	670	52.7	180	9.1	1,973	100.0
Census Tract 9	600	36.6	274	53.4	50	9.9	924	100.0	639	34.2	447	54.5	56	11.2	1,142	100.0	1,239	35.3	721	54.0	106	10.6	2,066	100.0
Census Tract 4	422	26.4	230	60.0	38	13.6	690	100.0	379	17.2	387	64.8	35	18.0	801	100.0	801	21.7	617	62.4	73	15.9	1,491	100.0
Census Tract 5.01	327	44.6	973	47.0	660	8.4	960	100.0	304	35.4	1,345	56.0	701	8.6	2,350	100.0	631	39.8	2,318	51.7	1,361	8.5	4,310	100.0
Census Tract 5.02	407	35.3	895	46.0	272	18.6	1,574	100.0	543	26.6	1,086	59.1	409	14.2	2,038	100.0	950	31.0	1,981	52.6	681	16.5	3,612	100.0
Census Tract 6	636	45.7	772	45.9	322	8.4	1,730	100.0	634	41.4	1,009	47.3	542	11.3	2,185	100.0	1,270	43.4	1,781	46.7	864	10.0	3,915	100.0
Census Tract 7	905	26.0	1,584	50.5	401	23.5	2,890	100.0	576	24.1	1,511	60.2	452	15.7	2,539	100.0	1,481	24.9	3,095	56.0	853	19.1	5,429	100.0
Census Tract 8	328	29.9	474	51.3	139	18.8	941	100.0	341	25.3	558	57.7	120	17.0	1,019	100.0	669	27.4	1,032	54.8	259	17.8	1,960	100.0
Census Tract 9	286		309		79		676		271		539		108		781		585		705		187		1,457	
Census Tract 10.02	685	53.5	903	39.9	154	6.5	1,942	100.0	697	45.7	1,011	42.7	260	11.6	2,168	100.0	1,762	49.3	1,914	41.4	414	9.3	4,110	100.0
Census Tract 10.03	471	60.3	425	28.7	237	11.0	1,133	100.0	501	54.0	524	38.5	244	7.5	1,269	100.0	972	56.9	949	34.0	481	9.1	2,402	100.0
Census Tract 11	367	64.9	647	29.7	257	5.4	1,271	100.0	381	56.0	716	39.1	305	4.9	1,402	100.0	748	60.0	363	34.0	562	5.2	2,673	100.0
Total	9,183	61.2	7,746	33.3	2,709	5.5	15,638	100.0	9,048	47.3	9,400	48.3	3,312	4.4	18,760	100.0	12,231	53.7	17,146	41.4	6,021	4.9	35,398	100.0
Study Area	11,931	49.5	16,810	46.5	6,030	4.0	34,771	100.0	11,806	32.9	21,596	57.9	6,935	9.2	40,337	100.0	23,737	38.6	38,406	52.2	12,965	7.2	75,108	100.0

Table 21
Distribution of Educational Attainment, by Sex and Census Tract: Census 2000
(Source: Census 2000 Summary File 3)

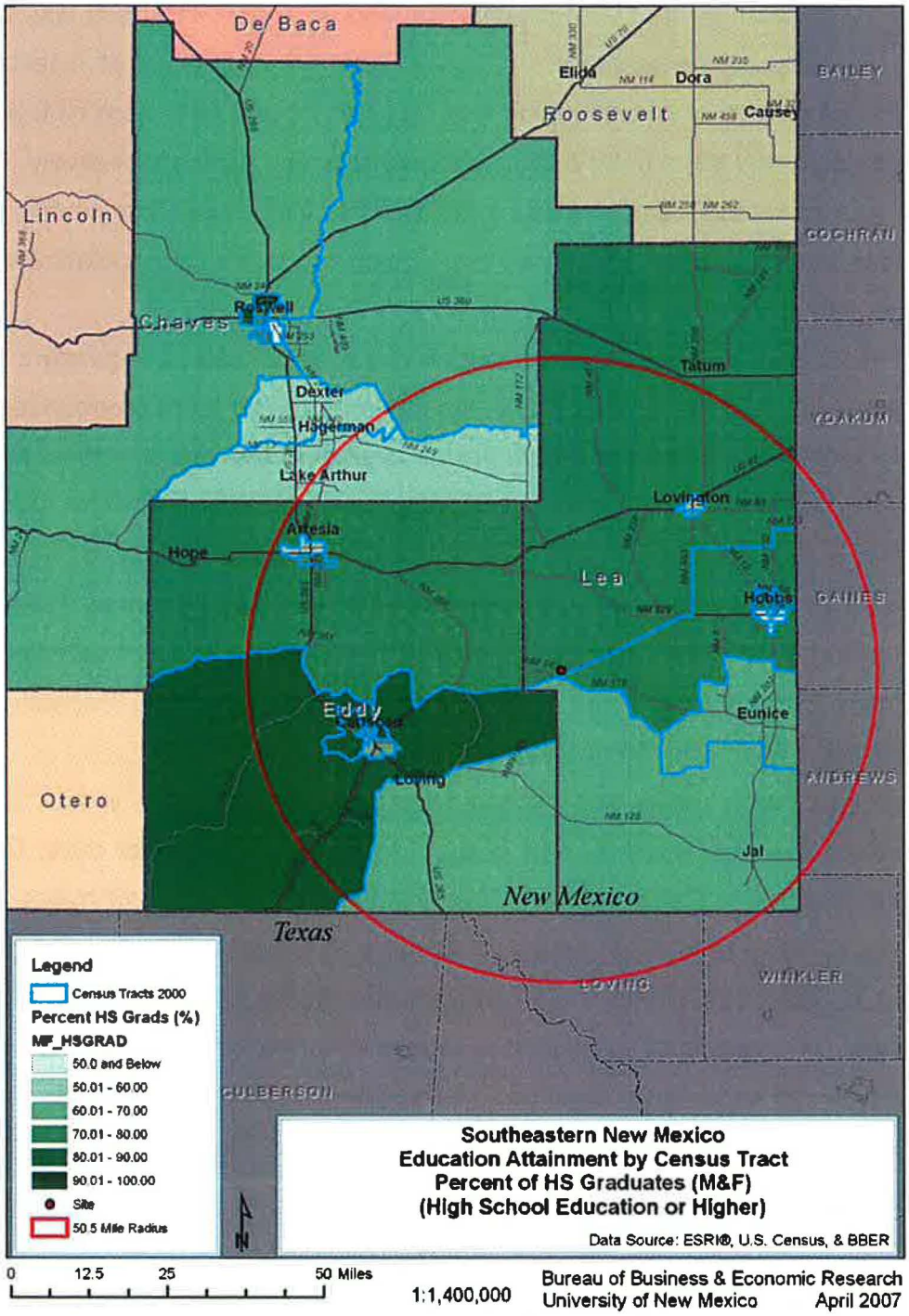
Study Area	Males				Females				Both Sexes			
	Less than HS	HS grad and some college	College Degree	Total	Less than HS	HS grad and some college	College Degree	Total	Less than HS	HS grad and some college	College Degree	Total
Census Tract 1	29.1	53.0	17.9	100.0	20.4	57.6	22.0	100.0	24.3	55.5	20.2	100.0
Census Tract 2	12.7	44.6	42.7	100.0	12.6	54.3	33.1	100.0	12.7	49.0	37.5	100.0
Census Tract 3	20.3	55.0	24.7	100.0	17.0	58.0	25.1	100.0	18.7	56.7	24.5	100.0
Census Tract 4.01	20.7	53.1	26.2	100.0	14.6	65.3	17.2	100.0	18.9	60.1	21.0	100.0
Census Tract 4.02	28.5	58.7	12.7	100.0	25.0	61.8	13.2	100.0	26.5	60.5	13.0	100.0
Census Tract 5	41.2	48.2	10.7	100.0	35.8	56.3	7.9	100.0	38.2	52.7	9.1	100.0
Census Tract 9	36.6	53.4	9.9	100.0	34.2	54.5	11.2	100.0	35.3	54.0	10.6	100.0
Census Tract 4	26.4	60.0	13.6	100.0	17.2	64.8	18.0	100.0	21.7	62.4	15.9	100.0
Census Tract 5.01	44.6	47.0	8.4	100.0	35.4	56.0	8.6	100.0	39.8	51.7	8.5	100.0
Census Tract 5.02	35.3	46.0	18.6	100.0	26.6	59.1	14.2	100.0	31.0	52.6	16.5	100.0
Census Tract 6	45.7	45.9	8.4	100.0	41.4	47.3	11.3	100.0	43.4	46.7	10.0	100.0
Census Tract 7	26.0	50.5	23.5	100.0	24.1	60.2	15.7	100.0	24.9	56.0	19.1	100.0
Census Tract 8	29.9	51.3	18.8	100.0	25.3	57.7	17.0	100.0	27.4	54.8	17.8	100.0
Census Tract 9												
Census Tract 10.02	53.5	39.9	6.5	100.0	45.7	42.7	11.6	100.0	49.3	41.4	9.3	100.0
Census Tract 10.03	60.3	28.7	11.0	100.0	54.0	38.5	7.5	100.0	56.9	34.0	9.1	100.0
Census Tract 2	64.9	29.7	5.4	100.0	56.0	39.1	4.9	100.0	60.0	34.0	5.2	100.0
Census Tract 3	61.2	33.3	5.5	100.0	47.3	48.3	4.4	100.0	53.7	41.4	4.9	100.0
Census Tract 4	49.5	46.5	4.0	100.0	32.9	57.9	9.2	100.0	38.6	52.2	7.2	100.0
Census Tract 5.01	44.6	47.0	8.4	100.0	35.4	56.0	8.6	100.0	39.8	51.7	8.5	100.0
Census Tract 5.02	25.9	56.9	17.3	100.0	26.6	53.3	20.1	100.0	26.3	54.8	18.9	100.0
Census Tract 6	36.8	44.6	18.6	100.0	29.0	46.2	24.8	100.0	32.4	45.5	22.1	100.0
Census Tract 7	31.3	54.8	13.9	100.0	22.7	59.5	17.8	100.0	27.3	57.0	15.7	100.0
Census Tract 8	34.9	50.4	14.8	100.0	33.5	54.8	11.8	100.0	34.1	52.7	13.2	100.0
Census Tract 9	42.6	45.7	11.7	100.0	35.5	50.7	13.8	100.0	38.8	48.4	12.8	100.0
Census Tract 10.02	45.6	46.5	7.9	100.0	41.4	46.6	12.0	100.0	43.4	46.6	10.1	100.0
Census Tract 10.03	41.6	37.5	20.9	100.0	39.5	41.3	19.2	100.0	40.5	39.5	20.0	100.0
Census Tract 11	28.9	50.9	20.2	100.0	27.2	51.1	21.8	100.0	28.0	51.0	21.0	100.0
Total	37.2	46.6	16.3	100.0	32.2	50.1	17.7	100.0	34.6	48.4	17.0	100.0
Study Area	34.3	48.3	17.3	100.0	28.8	52.0	19.2	100.0	31.6	51.1	17.3	100.0

The Census Tracts in the city of Hobbs had the highest proportion of people with less than a high school education. From highest to lowest, these are Census Tract 3 (60%), Census Tract 2 (56.9%), and Census Tract 1 (49.3%). Census Tracts 10.02 and 10.03, both in the town of Lovington had 43% and 41% with less than a high school education, respectively. Census Tract 10 in the city of Artesia was estimated to have 44% of its population that had did not graduate from high school. Census Tracts 14 and 13 in Lake Arthur reported 44% and 42%, respectively. Maps 18 to 20 juxtapose the census tracts and illustrate the disparities among these places. The darkest shaded areas had the highest proportion of population with at least a high school diploma.

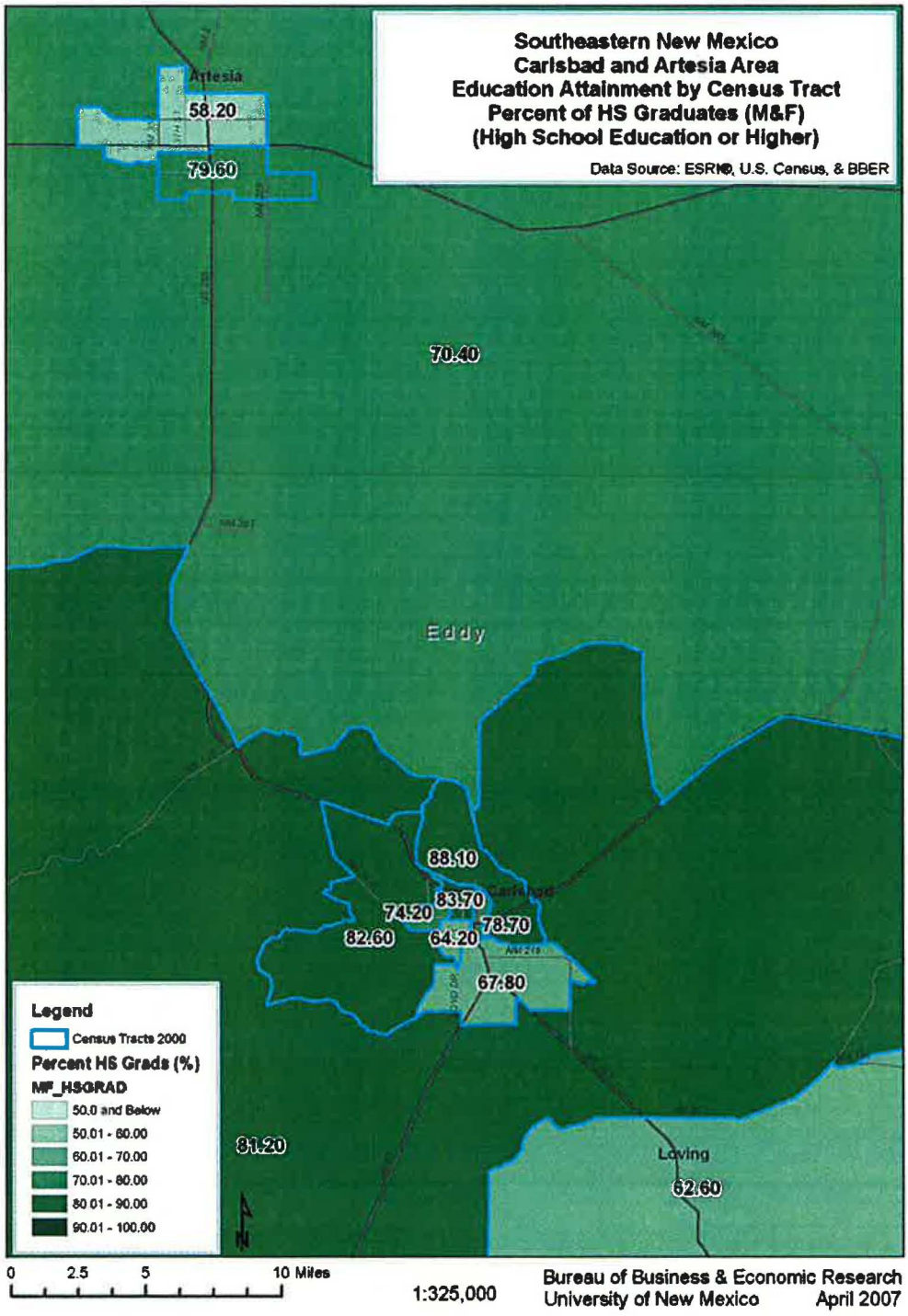
Table 20 and 21 point to the education disparity between the genders at the census tract level. In some census tracts, the differentials are more pronounced than in others. Census Tracts 1 to 4, which are all located in the city of Hobbs, had the highest proportion of men with no high school diploma. In rank order, from highest to lowest: first is Census Tract 3 with 65%; second is Census Tract 4, 61%; third is Census Tract 2, 60%; and fourth is Census Tract 1 with 54%. Census Tract 14 in Lake Arthur had 51% of its male population whith less than a high school education. Census Tracts 2 and 3, both in the city of Hobbs, had 54% and 56%, respectively, of their female population who did not graduate from high school.

In Eddy County, males had a distinct comparative advantage in four Census Tracts, namely, Census Tracts 2, 4.01 and 11 and in the Lake Arthur area, Census 12. Census Tract 2 in Carlsbad (43%) had the highest proportion of males with a college degree The comparative figure for females in this area is 33%. The gender breakdown in Carlsbad Census Tract 4.01 was 25% males versus 17% females. In Census Tract 11, outside of Artesia, the comparable figures are males, 24%, and females, 16%. In eight other Census Tracts, the proportion of men with college degrees was also higher than the women, but the differences were less than five percentage points.

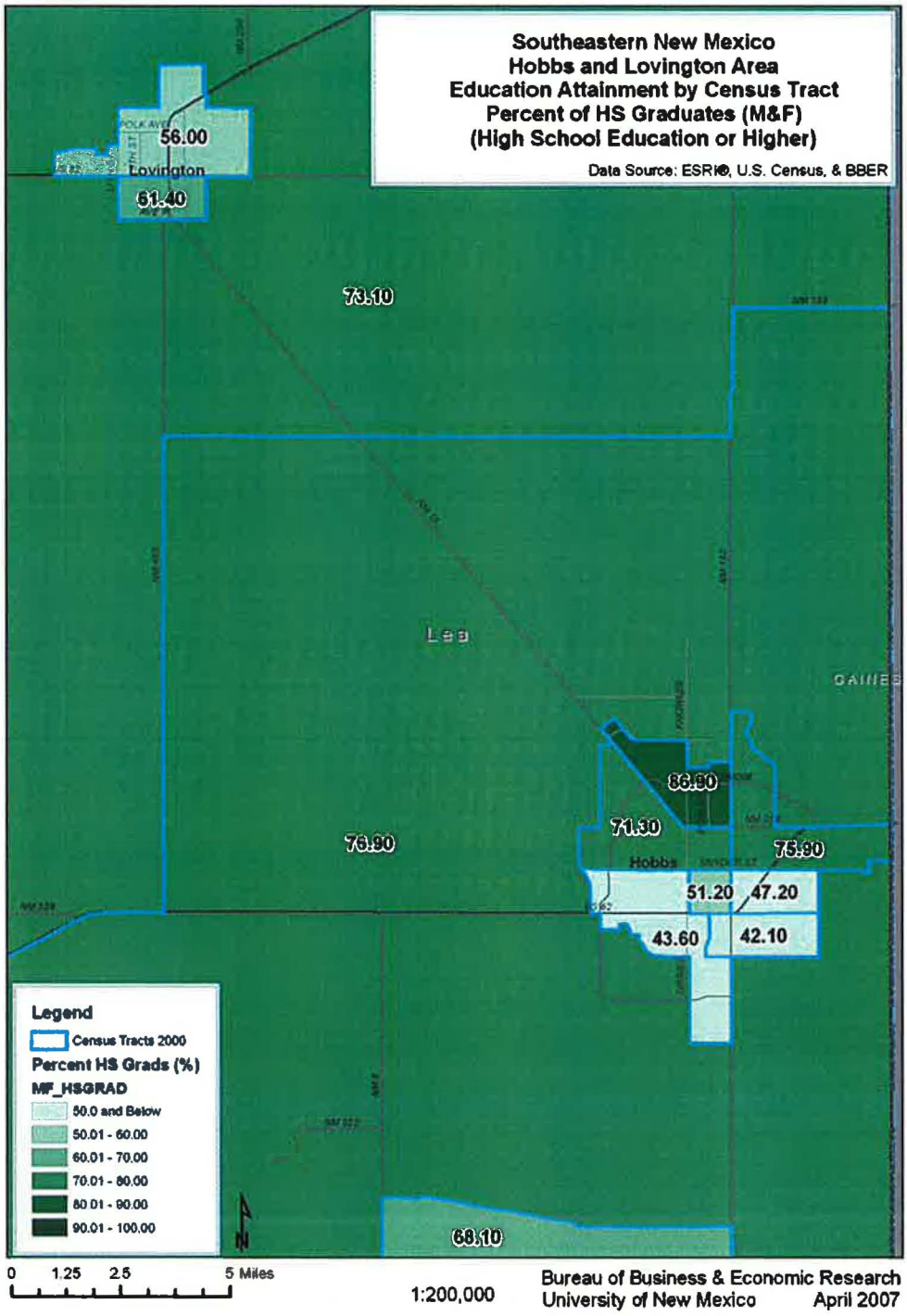
Map 18
Percent of High School Graduate and Higher: Census 2000
(Source: Census 2000 Summary File 3)



Map 19
Percent of Carlsbad and Artesia HS Graduate and Higher: Census 2000
(Source: Census 2000 Summary File 3)



Map 20
Percent of Hobbs and Lovington HS Graduate and Higher: Census 2000
(Source: Census 20000 Summary File 3)



School Enrollment Levels and Trends

This section will present and analyze data on school enrollment in the counties within the study area. Data from the National Center for Education Statistics were downloaded for each school district and aggregated to the county level. For the Lake Arthur area, only the statistics for the Lake Arthur Municipal School District is included in this report. College enrollment statistics were taken from the National Center for Education Statistics Institute of Education Sciences (http://nces.ed.gov/ipedspas/index.asp) and is limited to only two SY2002 and SY2003.

Table 22 tabulates the number of schools by grade level within the school district in the county. The Lake Arthur Municipal Schools have one school for each grade level. Lea County has a total of 18 elementary schools, 6 middle schools, and 7 high schools. Eddy County has a total of 18 elementary schools, six middle schools, and 3 high schools.

Table 22
School Districts and Number of Schools in Each Grade Level: SY2006
(Source: National Center for Education Statistics)

County	School District Name	Elementary School	Middle High School	High School	Total
Chaves	LAKE ARTHUR MUNICIPAL SCHOOLS	1	1	1	3
	EUNICE MUNICIPAL SCHOOLS	1	1	1	3
	HOBBS MUNICIPAL SCHOOLS	12	3	2	19
	JAL PUBLIC SCHOOLS	1	1	1	3
	LOVINGTON PUBLIC SCHOOLS	5	3	2	10
	TATUM MUNICIPAL SCHOOLS	1	1	1	3
Lea	**Total**	**20**	**9**	**7**	**38**
	ARTESIA PUBLIC SCHOOLS	6	2	1	11
	CARLSBAD MUNICIPAL SCHOOLS	11	3	1	16
	LOVING MUNICIPAL SCHOOLS	1	1	1	3
Eddy	**Total**	**18**	**6**	**3**	**30**
Study Area	**Total**	**39**	**16**	**11**	**71**

Public School Enrollment. Table 23 summarizes public school enrollment from SY1986 to SY2005. Tables 24 to 26 summarize school enrollment by grade and school district. Figures 7 to 10 graph school enrollment trends over a 20-year period. It appears that public school enrollment peaked in the SY1995 when enrollment was at 25,191 students. The public school enrollment stayed above 25,000 for the next two school years. Since SY1998 the enrollment figures have been on a downward spin, reaching its lowest point in SY2004, when enrollment was at 22,300 students. In 10 years, from SY1995 to SY2005, the study area lost a total of 2,600 students. Lake Arthur contributed about 60 students to this loss. Eddy County lost a total of 1,250 students while Lea County lost 1,300 students in this 10 years period. A slight improvement in the total enrollment figures was noted in SY2005 and this is recorded in Figure 7 which shows a slight upturn in the total school enrollment. This upward change appears to be mostly the result of improvements in the Grades 1 to 6 enrollment.

Figure 8 indicates that prior to SY2000, the enrollment decline was primarily the result of decreases in elementary and middle school enrollments. After SY2000, high school enrollment has started to drop. The downturn in the school enrollment, especially in the elementary and middle school levels, that started in the late 1990s is likely to be correlated with the flight of families with young children from the region. As shown earlier, Lea County had a negative growth rate (-.05%) between 1990 and 2000. Eddy County did not lose population during the 1990s but its annual growth rate was hardly measurable at 0.6%. The Lake Arthur area had the strongest (2.2% annual growth rate) population during the 1990s. This strong population growth most certainly influenced the rise in school enrollment during the mid-1990s. That population growth and school enrollment figures are highly correlated is clearly indicated by the rise and fall in the enrollment trend lines shown in Figures 8 to 11.

Table 23
Public School Enrollment, by Grade and County: School Year 1986 to 2005
(Source: National Center for Education Statistics)

School Year	Grade 1 - 6	Grade 7- 9	Grade 10-12	All Grades	Grade 1 - 6	Grade 7- 9	Grade 10-12	All Grades
	Lake Arthur				Eddy County			
1986	70	39	31	140	4,491	1,992	1,962	8,445
1987	81	39	34	154	4,464	1,980	1,982	8,426
1988	90	44	40	174	4,476	1,977	1,991	8,444
1989	90	40	46	176	4,586	2,055	1,959	8,600
1990	98	35	37	170	4,636	2,192	1,989	8,817
1991	93	39	40	172	4,727	2,253	2,106	9,086
1992	118	40	30	188	4,805	2,445	2,310	9,560
1993	103	49	45	197	4,786	2,554	2,351	9,691
1994	99	70	44	213	4,653	2,577	2,392	9,622
1995	90	77	59	226	5,082	2,992	2,388	10,462
1996	98	68	61	227	5,038	2,923	2,437	10,398
1997	99	68	62	229	5,211	2,783	2,539	10,533
1998	106	63	56	225	5,086	2,672	2,648	10,406
1999	96	62	51	209	4,914	2,545	2,585	10,044
2000	98	53	50	201	4,778	2,583	2,399	9,760
2001	91	46	47	184	4,782	2,457	2,283	9,522
2002	93	43	38	174	4,733	2,462	2,248	9,443
2003	74	50	36	160	4,664	2,512	2,231	9,407
2004	72	27	31	130	4,562	1,588	2,115	8,265
2005	68	46	29	143	4,670	2,446	2,092	9,208
	Lea County				**Study Area**			
1986	6,842	3,064	2,471	12,377	11,403	5,095	4,464	20,962
1987	6,735	2,906	2,432	12,073	11,280	4,925	4,448	20,653
1988	6,816	2,876	2,397	12,089	11,382	4,897	4,428	20,707
1989	6,731	2,888	2,362	11,981	11,407	4,983	4,367	20,757
1990	6,599	2,942	2,334	11,875	11,333	5,169	4,360	20,862
1991	6,710	3,008	2,354	12,072	11,530	5,300	4,500	21,330
1992	6,662	3,166	2,586	12,414	11,585	5,651	4,926	22,162
1993	6,441	3,325	2,634	12,400	11,330	5,928	5,030	22,288
1994	6,232	3,262	2,574	12,068	10,984	5,909	5,010	21,903
1995	6,066	3,319	2,593	11,978	11,238	6,388	5,040	22,666
1996	5,975	3,301	2,703	11,979	11,111	6,292	5,201	22,604
1997	6,068	3,274	2,747	12,089	11,378	6,125	5,348	22,851
1998	5,892	3,079	2,828	11,799	11,084	5,814	5,532	22,430
1999	5,570	2,959	2,775	11,304	10,580	5,566	5,411	21,557
2000	5,436	2,831	2,693	10,960	10,312	5,467	5,142	20,921
2001	5,412	2,780	2,643	10,835	10,285	5,283	4,973	20,541
2002	5,316	2,730	2,630	10,676	10,142	5,235	4,916	20,293
2003	5,286	2,762	2,570	10,618	10,024	5,324	4,837	20,185
2004	5,246	2,876	2,505	10,627	9,880	4,491	4,651	19,022
2005	5,434	2,802	2,443	10,679	10,172	5,294	4,564	20,030

growth in the area during the 1990s. Evidently, the families with very young children left Lea County and Eddy County in larger numbers than those with older children as reflected in the public school enrollment.

Figures 4 to 6, in an earlier section of this report, combined with the school enrollment data summarized in Figures 8 to 11 suggest that the migration streams from the study area are comprised largely of young families. The exaggerated constriction in the ages from 20-24 years to 30 to 34 years, the smaller base in the population pyramids of the study area populations and the rapid declines in the elementary and middle school enrollments confirm the self-selection that is occurring among migrants who are leaving the region. It seems that the out-migration of families with children is also beginning to impact high school enrollment in the region. Starting in SY1999, high school enrollments in the three counties have been declining. Between SY 1995 and SY2000, the study area had a gain of about 100 high school students. But between SY2000 and SY2005, high school enrollment decreased by as many as 580 students. Of these, 250 students were from Lea County; 310 from Eddy County; and 20 students from Lake Arthur.

Figure 7
Study Area Public School Enrollment: SY1986 to SY2005, All Grades
(Source: National Center for Education Statistics)

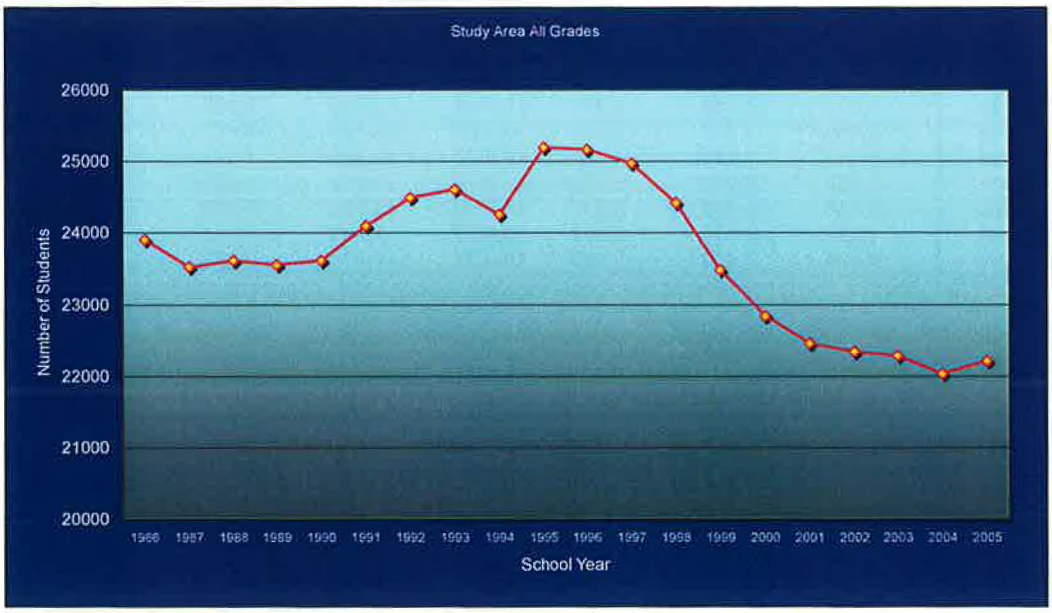


Figure 8
Study Area Public School Enrollment, by Grade: SY1986 to SY2005
(Source: National Center for Education Statistics)

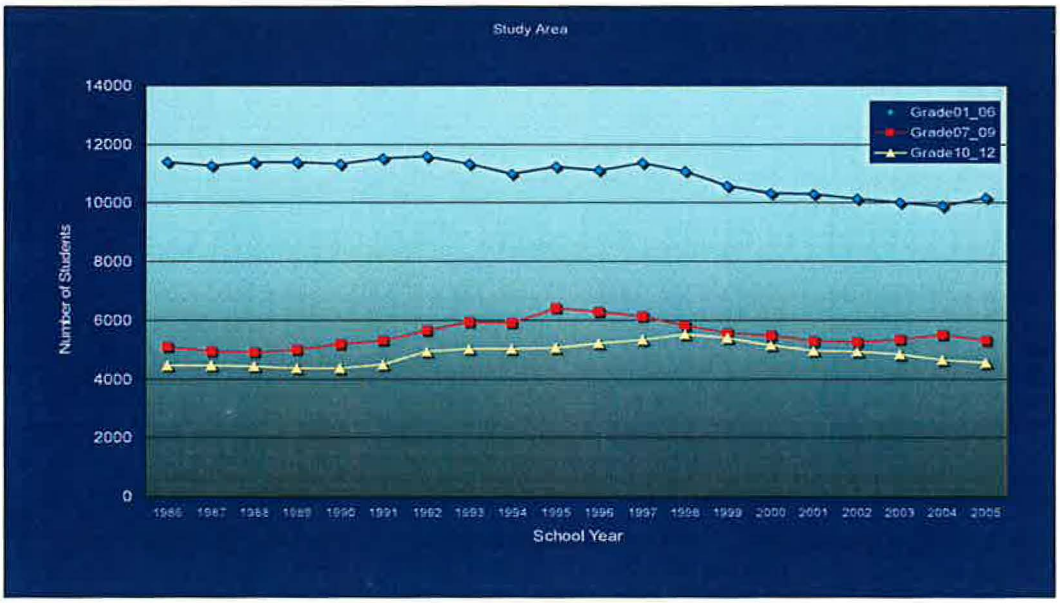


Figure 9
Lea and Eddy Public School Enrollment, by Grade: SY1986 to SY2005
(Source: National Center for Education Statistics)

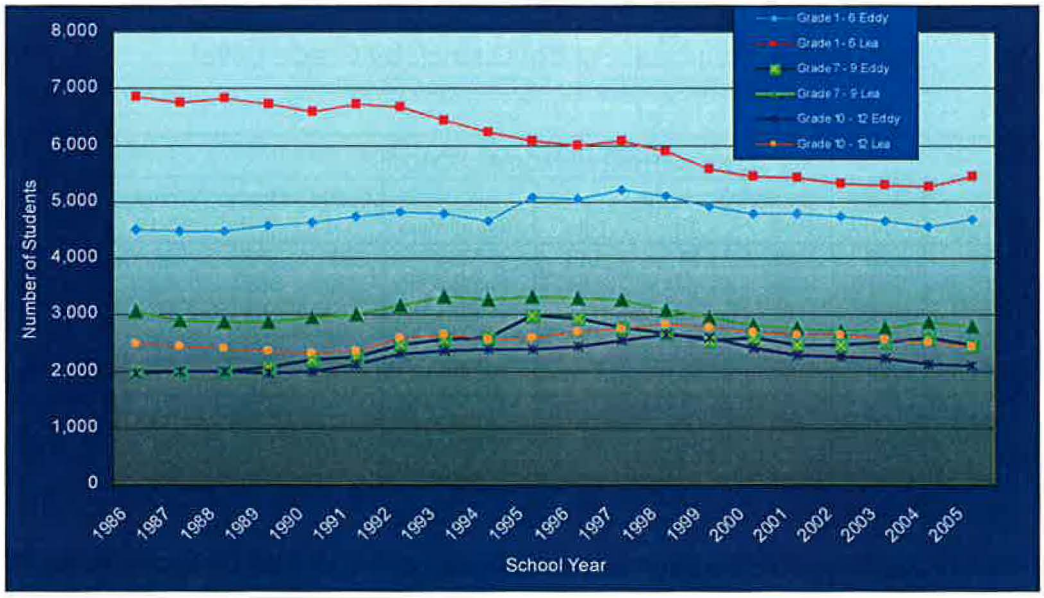


Figure 10
Lake Arthur Public School Enrollment: School Year 1986 to 2005
(Source: National Center for Education Statistics)

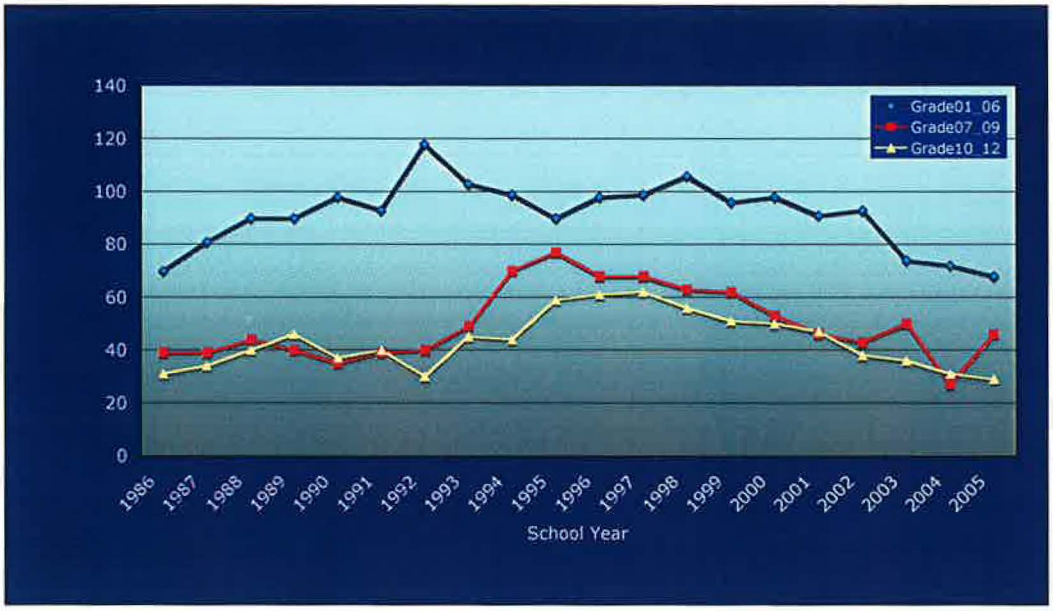


Table 24
Lake Arthur Municipal School District, by Grade Level
(Source: National Center for Education Statistics)

LAKE ARTHUR MUNICIPAL SCHOOLS									
School Year	Grade 1-6	Grade 7-9	Grade 10-12	Total	School Year	Grade 1-6	Grade 7-9	Grade 10-12	Total
1986	70	39	31	140	1996	98	68	61	227
1987	81	39	34	154	1997	99	68	62	229
1988	90	44	40	174	1998	106	63	56	225
1989	90	40	46	176	1999	96	62	51	209
1990	98	35	37	170	2000	98	53	50	201
1991	93	39	40	172	2001	91	46	47	184
1992	118	40	30	188	2002	93	43	38	174
1993	103	49	45	197	2003	74	50	36	160
1994	99	70	44	213	2004	72	27	31	130
1995	90	77	59	226	2005	68	46	29	143

Table 25
District: SY1986 to SY2005
(Source: National Center for Education Statistics)

ARTESIA PUBLIC SCHOOLS

School Year	Grade1-6	Grade 7-9	Grade 10-12	Total	School Year	Grade1-6	Grade 7-9	Grade 10-12	Total
1986	1,385	678	685	2,748	1996	1,784	949	851	3,584
1987	1,327	653	654	2,634	1997	1,868	921	878	3,667
1988	1,338	705	644	2,687	1998	1,839	890	940	3,669
1989	1,357	716	609	2,682	1999	1,748	883	935	3,566
1990	1,400	753	631	2,784	2000	1,712	857	878	3,447
1991	1,409	818	668	2,895	2001	1,657	829	818	3,304
1992	1,461	899	738	3,098	2002	1,638	834	809	3,281
1993	1,490	950	764	3,204	2003	1,595	842	780	3,217
1994	1,459	926	827	3,212	2004	1,570	528	736	2,834
1995	1,796	966	822	3,584	2005	1,606	820	754	3,180

CARLSBAD MUNICIPAL SCHOOLS

School Year	Grade1-6	Grade 7-9	Grade 10-12	Total	School Year	Grade1-6	Grade 7-9	Grade 10-12	Total
1986	2,900	1,220	1,277	5,397	1996	2,992	1,846	1,490	6,328
1987	2,934	1,251	1,292	5,477	1997	3,063	1,715	1,563	6,341
1988	2,932	1,189	1,283	5,404	1998	2,968	1,651	1,596	6,215
1989	3,025	1,255	1,259	5,539	1999	2,890	1,520	1,520	5,930
1990	3,027	1,343	1,278	5,648	2000	2,802	1,565	1,388	5,755
1991	3,087	1,333	1,347	5,767	2001	2,854	1,478	1,348	5,680
1992	3,114	1,426	1,464	6,004	2002	2,833	1,503	1,319	5,655
1993	3,041	1,468	1,474	5,983	2003	2,809	1,534	1,319	5,662
1994	2,937	1,527	1,462	5,926	2004	2,725	972	1,250	4,947
1995	3,027	1,894	1,463	6,384	2005	2,796	1,470	1,235	5,501

LOVING MUNICIPAL SCHOOLS

School Year	Grade1-6	Grade 7-9	Grade 10-12	Total	School Year	Grade1-6	Grade 7-9	Grade 10-12	Total
1986	206	94	0	300	1996	262	128	96	486
1987	203	76	36	315	1997	280	147	98	525
1988	206	83	64	353	1998	279	131	112	522
1989	204	84	91	379	1999	276	142	130	548
1990	209	96	80	385	2000	264	161	133	558
1991	231	102	91	424	2001	271	150	117	538
1992	230	120	108	458	2002	262	125	120	507
1993	255	136	113	504	2003	260	136	132	528
1994	257	124	103	484	2004	267	88	129	484
1995	259	132	103	494	2005	268	156	103	527

Table 26
Lea County Public School Enrollment, by School District: SY1986 to SY2005
(Source: National Center for Education Statistics)

School Year	Grade1-6	Grade 7-9	Grade 10-12	Total	School Year	Grade1-6	Grade 7-9	Grade 10-12	Total
EUNICE MUNICIPAL SCHOOLS									
1986	451	189	110	750	1996	331	217	210	758
1987	412	187	130	729	1997	307	228	211	746
1988	391	200	133	724	1998	285	192	213	690
1989	393	205	138	736	1999	267	186	173	626
1990	404	191	155	750	2000	258	186	154	598
1991	381	196	151	728	2001	246	167	155	568
1992	371	224	181	776	2002	262	156	147	565
1993	359	249	167	775	2003	252	146	146	544
1994	363	227	181	771	2004	265	96	144	505
1995	329	241	183	753	2005	277	136	120	533
HOBBS MUNICIPAL SCHOOLS									
1986	4,184	1,915	1,562	7,661	1996	4,007	2,087	1,612	7,706
1987	4,204	1,809	1,539	7,552	1997	4,026	2,035	1,665	7,726
1988	4,335	1,745	1,517	7,597	1998	3,899	1,948	1,690	7,537
1989	4,312	1,725	1,512	7,549	1999	3,702	1,911	1,659	7,272
1990	4,259	1,798	1,474	7,531	2000	3,583	1,800	1,652	7,035
1991	4,442	1,853	1,447	7,742	2001	3,558	1,837	1,649	7,044
1992	4,365	1,952	1,531	7,848	2002	3,520	1,772	1,667	6,959
1993	4,219	2,051	1,549	7,819	2003	3,462	1,785	1,646	6,893
1994	4,035	2,048	1,524	7,607	2004	3,459	1,199	1,596	6,254
1995	4,002	2,100	1,527	7,629	2005	3,571	1,844	1,567	6,982
JAL PUBLIC SCHOOLS									
1986	382	158	127	667	1996	238	130	139	507
1987	341	150	109	600	1997	239	143	125	507
1988	338	148	114	600	1998	259	131	133	523
1989	311	130	94	535	1999	224	118	121	463
1990	285	131	105	521	2000	188	110	126	424
1991	272	135	100	507	2001	191	115	86	392
1992	259	153	113	525	2002	171	108	103	382
1993	263	169	115	547	2003	148	115	103	366
1994	250	139	121	510	2004	138	83	115	336
1995	240	149	142	531	2005	150	109	109	368
LOVINGTON PUBLIC SCHOOLS									
1986	1,653	713	572	2,938	1996	1,262	786	659	2,707
1987	1,614	686	555	2,855	1997	1,345	765	665	2,775
1988	1,600	696	546	2,842	1998	1,310	709	708	2,727
1989	1,545	741	534	2,820	1999	1,235	654	739	2,628
1990	1,501	731	530	2,762	2000	1,263	644	679	2,586
1991	1,473	727	579	2,779	2001	1,273	587	664	2,524
1992	1,526	749	667	2,942	2002	1,234	620	633	2,487
1993	1,438	751	699	2,888	2003	1,296	645	594	2,535
1994	1,422	750	648	2,820	2004	1,269	445	581	2,295
1995	1,338	749	662	2,749	2005	1,330	650	574	2,554
TATUM MUNICIPAL SCHOOLS									
1986	172	89	100	361	1996	137	81	83	301
1987	164	74	99	337	1997	151	103	81	335
1988	152	87	87	326	1998	139	99	84	322
1989	170	87	84	341	1999	142	90	83	315
1990	150	91	70	311	2000	144	91	82	317
1991	142	97	77	316	2001	144	74	89	307
1992	141	88	94	323	2002	129	74	80	283
1993	162	105	104	371	2003	128	71	81	280
1994	162	98	100	360	2004	115	53	69	237
1995	157	80	79	316	2005	106	63	73	242

Minority Student Enrollment. Table 27 and Figure 11 show the levels and trends of minority student enrollment in the study area. School enrollment statistics for minority students were not disaggregated by grade level. For consistency, the denominator for calculating the proportion of minority students during each school year included including Kindergarten and special education students.

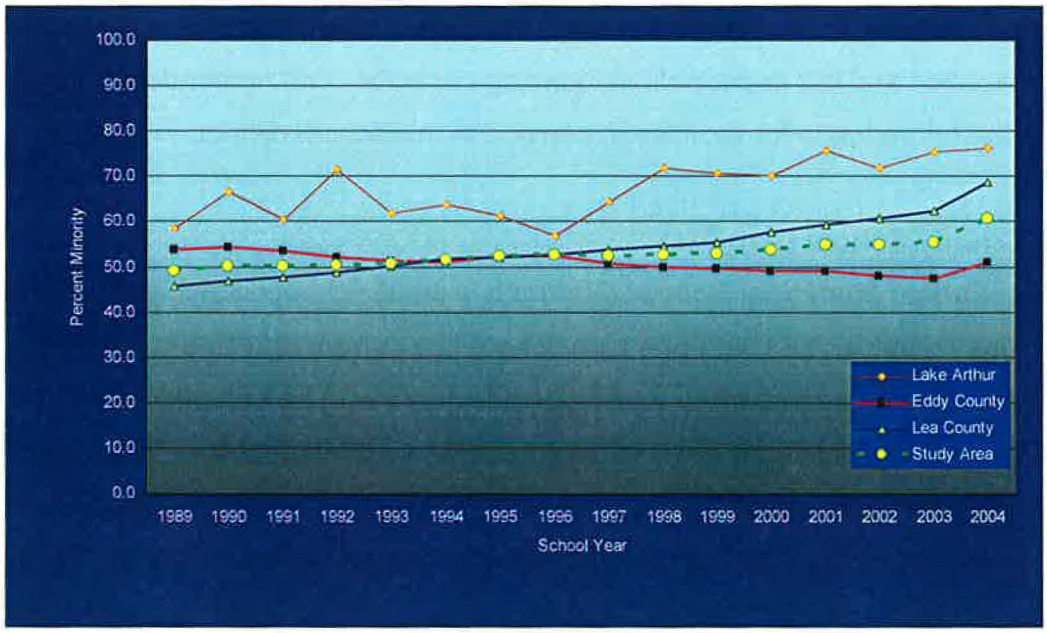
Overall, the proportion of minority students in the study area has been steadily increasing. In 16 years, the minority students share in the total enrollment grew from 50% to 61%. Lea County has the fastest growing minority student population. Table 27 indicates an increase in Lea County's minority student enrollment from approximately 6,200 or 46% in SY1989 to about 7,250 students or 69% in SY2004. In Lake Arthur, the number of minority students has been fluctuating but their share in the total school population has been gradually increasing, from 59% in SY1989 to 76% in SY2004. Meanwhile, minority enrollment in Eddy County has been on a downward trajectory since SY1995, when their numbers topped 5,900 students giving them a 52% share in the total student population.

In SY2004, Eddy County registered over 4,600 minority students, which is about half their total student enrollment for this school year. This rise in the minority student enrollment is consistent with the strong population growth of the Hispanic population in the region (see Table 2), which is expected to continue throughout the rest of the decade, even if migration into the region were to stop today. The Hispanic population is young thus has a great potential for growth. In contrast to the older Anglo population, the Hispanic population is expected to have a higher fertility rate and a lower mortality rate. This combination can result in a strong population growth from natural increase. Combined this with Hispanic migration to the region, the potential is high for a rapid population growth that can translate to future increases in minority student enrollment.

Table 27
Minority Public School Enrollment, by Census Tract: SY1989 to SY2004
(Source: National Center for Education Statistics)

School Year	Lake Arthur			Eddy County		
	Total	Minority	% Minority	Total	Minority	% Minority
1989	200	117	58.5	9,439	5,082	53.8
1990	191	127	66.5	9,626	5,218	54.2
1991	195	118	60.5	9,901	5,307	53.6
1992	206	147	71.4	10,390	5,401	52.0
1993	215	133	61.9	10,519	5,378	51.1
1994	235	150	63.8	10,403	5,301	51.0
1995	240	147	61.3	11,326	5,917	52.2
1996	255	145	56.9	11,201	5,851	52.2
1997	249	160	64.3	11,342	5,745	50.7
1998	238	171	71.8	11,191	5,586	49.9
1999	224	158	70.5	10,807	5,347	49.5
2000	221	155	70.1	10,500	5,139	48.9
2001	206	156	75.7	10,188	5,004	49.1
2002	194	139	71.6	10,230	4,904	47.9
2003	179	135	75.4	10,188	4,832	47.4
2004	168	128	76.2	9,058	4,615	50.9
School Year	Lea County			Study Area		
	Total	Minority	% Minority	Total	Minority	% Minority
1989	13,510	6,177	45.7	23,149	11,376	49.1
1990	13,335	6,244	46.8	23,152	11,589	50.1
1991	13,545	6,449	47.6	23,641	11,874	50.2
1992	13,643	6,667	48.9	24,239	12,215	50.4
1993	13,557	6,816	50.3	24,291	12,327	50.7
1994	13,237	6,839	51.7	23,875	12,290	51.5
1995	13,216	6,880	52.1	24,782	12,944	52.2
1996	13,265	6,988	52.7	24,721	12,984	52.5
1997	13,079	7,031	53.8	24,670	12,936	52.4
1998	12,725	6,951	54.6	24,154	12,708	52.6
1999	12,167	6,743	55.4	23,198	12,248	52.8
2000	11,765	6,777	57.6	22,486	12,071	53.7
2001	11,660	6,921	59.4	22,054	12,081	54.8
2002	11,546	7,006	60.7	21,970	12,049	54.8
2003	11,509	7,169	62.3	21,876	12,136	55.5
2004	10,563	7,247	68.6	19,789	11,990	60.6

Figure 11
Percent of Minority Students in Public Schools: School Year 1989 to 2004
(Source: National Center for Education Statistics)



Public School Facility Expansion Plans. Phone interviews with school district superintendents in the study area asked two questions: First, "Are your schools at capacity or not?;" Second, "What are your future plans for facilities expansion?" The responses are presented below.

Eddy County School Districts:

Artesia Public School District is below capacity with their current enrollment of about 3,500 students. Their full capacity is 5,000 students. The superintendent believes that their elementary schools are overcrowded. It is expected that in two years, Artesia will be building another elementary school to relieve overcrowding at this grade level. However, there is no plan to build a new high school building.

Carlsbad Municipal School which has a current enrollment of about 4,000 students could accommodate 800 more students in their existing facilities. There is

no future plan to expand but the superintendent indicated that some of the elementary schools may be consolidated for better logistics.

Loving Municipal School District has one facility for each grade level. The superintendent reported that about 550 students are currently enrolled. This is a very small school district and future expansion depends both on demonstrated need for new facilities and the municipalities bonding capacity. The respondent could not say what the future holds for facilities expansion in this school district.

Lea County School Districts:

Eunice Municipal School District is a small school district with one elementary, one middle school, and one high school. Its current enrollment is 574 students but it can accommodate more than twice this number. The superintendent reported that the school district has a maximum capacity of 1,250 students. The district has no future expansion plans.

Hobbs Municipal School District is the biggest school district in the study area. It has 12 elementary schools, 3 middle schools and 2 high schools. One of the high schools is an alternative high school. Currently, this school district has a total enrollment of over 7,700 students and it is near capacity, according to the superintendent of the district. A new elementary school is planned for construction but no high school expansion is expected.

Jal Public School District is the second smallest school district in the study area. Its current enrollment is 450 students and the superintendent indicated that this is way under capacity. There are no plans for any future expansion.

Lovington Public School District has 5 elementary schools, 1 middle school, 1 junior high school, and 2 high schools. One high school is an alternative school. Current enrollment is about 3,090 students and full capacity is at 3,300 students. This district is currently building a 9^{th} grade academy and new classrooms for Kindergarten and pre-Kindergarten students. August 2008 is the expected completion date of these new academy and classrooms.

Tatum Municipal School District is the smallest school district in the study area. It has one elementary school, one middle school, and one high school. Cur-

rent enrollment was estimated by the superintendent at 300 students. The maximum capacity of the district is about 400 students. The district is ineligible for expansion anytime soon.

College Enrollment. Three post-secondary educational institutions were identified in the region. Two are state institutions, namely, New Mexico State University-Carlsbad and New Mexico Junior College. The College of the Southwest, which is in the city of Hobbs, is privately owned. Fall 2003 and Fall 2004 student enrollments were downloaded from the National Center for Education Statistics Institute of Education Sciences' website (see citation above). Current enrollment and expansion plans were extracted from the colleges' respectively websites, with the exception of New Mexico Junior College (NMJC) where the numbers and expansion plans were from a phone interview with the Dean of Enrollment.

The NMSU-Carlsbad website is http://artemis.nmsu.edu/Default.html. The website for College of the Southwest (CSW) is http://www.csw.edu/183312ihtml .

Table 28 shows that, in general, college enrollment in the region has been increasing. The exception to this pattern is CSW whose enrollment has been decreasing. CSW lost approximately 14% (84 students) of its enrollment from Fall 2003 to Fall 2004. It lost an additional 20% (115 students) from Fall 2004 to Spring 2007. NMJC appears to have the highest enrollment increase. NMJC's Fall 2003 enrollment was approximately 1,520; Fall 2004, enrollment rose to 2,020; Spring 2007 enrollment increased to 3,200 students or 58% more than Fall 2004. NMSU-Carlsbad's student population also increased, but a lower level than NMJC, during the same time period. NMSU-Carlsbad's enrollment rose from 800 in Fall 2003 to 1,200 in Spring 2007.

Future expansion plans. The Dean of enrollment for NMJC reported that the college is not at full capacity. The maximum capacity for the college is 5,000 students. This number is expected by SY2010. No facilities expansion is anticipated in the very near future.

NMSU-Carlsbad is a two-year branch community college of New Mexico State University and is independently accredited by the North Central Association. Its website reported the following:

> For 1998, 1999, and 2000, NMSU-C was the only two-year college in the state to be recognized consecutively by Quality New Mexico. NMSU-C has a student population of approximately 1,200 students, approximately 28 full-time faculty, 45 part-time faculty and 70 full-time staff members. The college has a facility of 142,000 square feet at its primary Carlsbad campus with more the 500 personal computers for faculty, staff, and student use. More than 400 are networked and have Internet access. The remaining computers are used for testing and teaching beginning computer skills in the ABE Program. The MSDP, a state-of-the-art training program located on campus, is equipped with computer-integrated manufacturing systems and equipment, such as computer-aided design, computer-aided manufacturing, and computer numerically controlled systems (CAD/CAM/CNC).

No facilities expansion was indicated on their website and BBER was unable to reach a live person despite repeated attempts. But NMSU and NMJC are both state institutions and as such facilities expansion go through state legislation and requires bond and mill levies for support. BBER checked past and current legislations but found no request for capital outlay from either institution. By contrast, CSW plans to expand to 1,000 students from its current enrollment of 470 students. It was not indicated when CSW would want to achieve this higher enrollment goal. CSW posted its strategic plan on its website but this document did not mention any facilities expansion in the future.

Table 28
College Enrollment: Fall 2003 – 2004
(Source: National Center for Education Statistics Institute of Education Sciences)

County	City	College Name	Fall 2003	Fall 2004	Spring 2007
Eddy	Carlsbad	New Mexico State University-Carlsbad	799	828	1,200*
Lea	Hobbs	New Mexico Junior College	1,517	2,021	3,200**
Lea	Hobbs	College of the Southwest	667	583	468***
Source:	* New Mexico State Univesity-Carlsbad website: http://artemis.nmsu.edu/Default.htm **Interview with New Mexico Junior College Dean of Enrollment on April 24, 2007. ***College of the Southwest website: http://www.csw.edu/183312.ihtml				

Poverty Status of Study Area Residents

Poverty status is a relative measure of economic well-being that is determined on the basis of family income and the number of people in that family. The Census Bureau calculates income cutoffs that serve as guidelines to determine the poverty status of families and unrelated individuals. "The total income of each family or unrelated individual was tested against the appropriate poverty threshold. If the total income was less than the corresponding cutoff, the family or unrelated individual was classified as 'below the poverty level.' The number of persons below the poverty level was the sum of the number of persons in families with incomes below the poverty level and the number of unrelated individuals with incomes below the poverty level." (US Census Bureau Technical Documentation, Appendix B. Definitions of Subject Characteristics, p. B-28, January 1993.)

The definition of poverty status was based on the Agriculture Department's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food and its 1961 economy food plan, which was the least costly of four nutritionally adequate food plans. Thus, the poverty level for these families was set at three times the cost of the economy food plan. The poverty thresholds are revised yearly to compensate for changes in the cost of living as reflected in the Consumer Price Index. The Census Bureau determines poverty status for all persons except institutionalized persons, individuals in military group quarters and in college dormitories, and unrelated individuals under 15 years old. (Ibid.)

Tables 29 and 30 contain the poverty statistics for the study area population. Maps 21 to 23 show the geographic distribution of this statistics. Although statistics are presented separately for Hispanic and minorities, these categories are overlapping. Most of the minorities are also Hispanics. These categories were combined because of the small numbers of non-Hispanic non-White races.

The poverty rate in the study area is slightly higher than for the state as a whole. New Mexico's poverty rate in 2000 was calculated at 18% compared to 25% for the study area. Tables 29 and 30 indicate that there is great variability in poverty

status across geography and among different categories of people. Table 30 shows that in the year 2000, Eddy County had the lowest proportion of poor people. Less than 20% of its population were below the poverty threshold. Lea County and Chaves County had about equal proportions, 21%, of poor people. Among cities in the area, the top five in descending order are the following: Lake Arthur (24.6%), Hobbs (24.2%), Loving (23.9%), Lovington (22.2%), and Artesia (20.2%).

Regardless of place of residence, Hispanics and minorities had a higher poverty rate than Anglos. Among Anglos, those who lived in Loving had the highest poverty rate. Twenty percent of them were poor. Anglos who lived in Hobbs had the lowest poverty rate; 10% of Anglos in Hobbs were poor. Conversely, Hispanics who lived in Hobbs had the highest proportion of poor people. Approximately 36% were below the poverty threshold while Hispanics who lived in Tatum (18%) had the lowest poverty rate. As expected, the minorities with highest and lowest proportion of poor people also lived in Hobbs and Tatum. The poverty rates for minorities in these cities are 36% and 21%, respectively.

Table 29
Poverty Rate of City Residents, by Race and Ethnicity: Census 2000
(Source: Census 2000 Summary File 4)

Study Area	Population under poverty	Poverty Rate %	Hispanic* Poverty Population	Hispanic* Poverty Rate %	Anglo** Poverty population	Anglo** poverty Rate %	Minority*** Poverty Population	Minority** * Poverty Rate %
Chaves County	**12,778**	**21.27**	**8,550**	**32.26**	**3,539**	**11.34**	**9,239**	**32.00**
Lake Arthur	98	24.56	78	29.89	20	14.49	78	29.89
Eddy County	**9,425**	**18.51**	**5,754**	**28.89**	**3,295**	**11.31**	**6,130**	**28.17**
Artesia	2,177	20.15	1,521	29.94	547	10.09	1,630	30.27
Carlsbad	4,175	16.47	2,051	22.11	1,883	12.72	2,292	21.73
Loving	317	23.98	266	24.84	47	19.50	270	24.98
Lea County	**11,317**	**21.08**	**7,019**	**33.06**	**3,311**	**11.34**	**8,006**	**32.71**
Eunice	402	15.65	238	23.36	149	9.92	253	23.71
Hobbs	6,670	24.21	4,104	35.52	1,722	12.53	4,948	35.84
Jal	361	17.91	224	26.99	131	11.46	230	26.35
Lovington	2,051	22.15	1,504	30.97	481	11.95	1,570	29.99
Tatum	134	18.69	66	18.44	53	15.73	81	21.32

Note: Poverty Rate is the ratio of population who are below 100% of poverty as defined by the Census Bureau.
* Hispanic is of all races.
** Anglo refers to those who identified themselves as White Only Race and Non-Hispanic.
***Minority refers to those who identified themselves as White Hispanic and all Non-White races.

Table 30 details the poverty rate across Census Tracts. Figure 12 graphs the poverty rate by census tract. Slightly over 21,000 people in the study area were determined to have fallen below the poverty threshold in the year 2000. These are distributed across the region as follows: 11,320 or 53% lived in Lea County; 8,770 or 41% lived in Eddy County; and 1,330 or 6% lived in the Lake Arthur area. Table 22 and Figure 13 show that 10 census tracts had poverty rates higher than the study area as a whole. Four of the census tracts with the highest proportion of poor people are in Lea County. These are Census Tract 3 (53%), Census Tract 4 (49%), Census Tract 1 (45%), and Census Tract 2 (45%). Census Tract 5 (41%) in Eddy County had the fifth highest poverty rate in the region. Maps 21 to 23 point to the location of these Census Tracts. Only Eddy County Census Tract 2 had the lowest poverty rate; seven percent of this census tract's population was below the poverty threshold in 2000. The census tract with the second lowest poverty rate is Census Tract 12 in the Lake Arthur area with 11% poverty rate. Census Tract 5.01 in Lea County, Census Tracts 4.01 and 6 in Eddy County round up the five areas with the lowest poverty rates in the study area.

Figure 12
Poverty Rate, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)

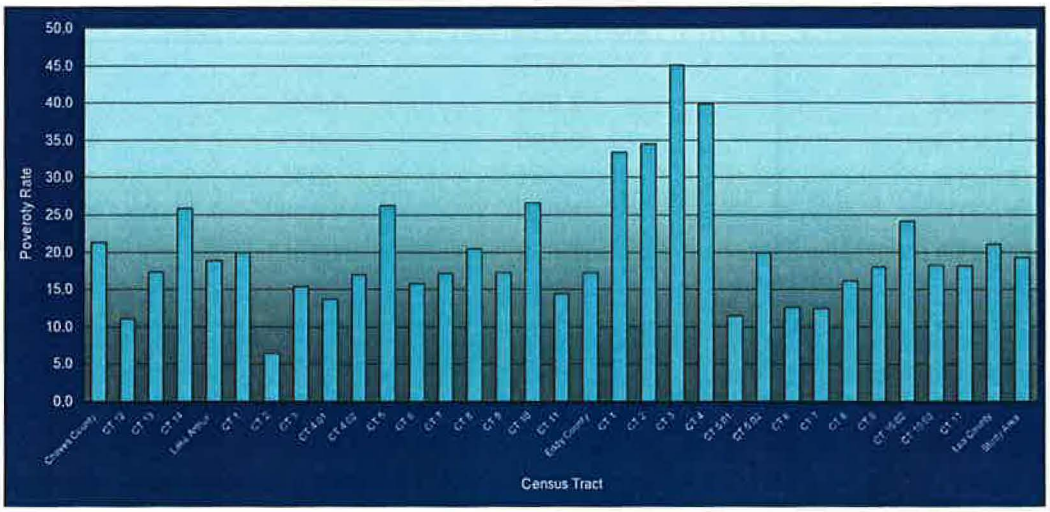
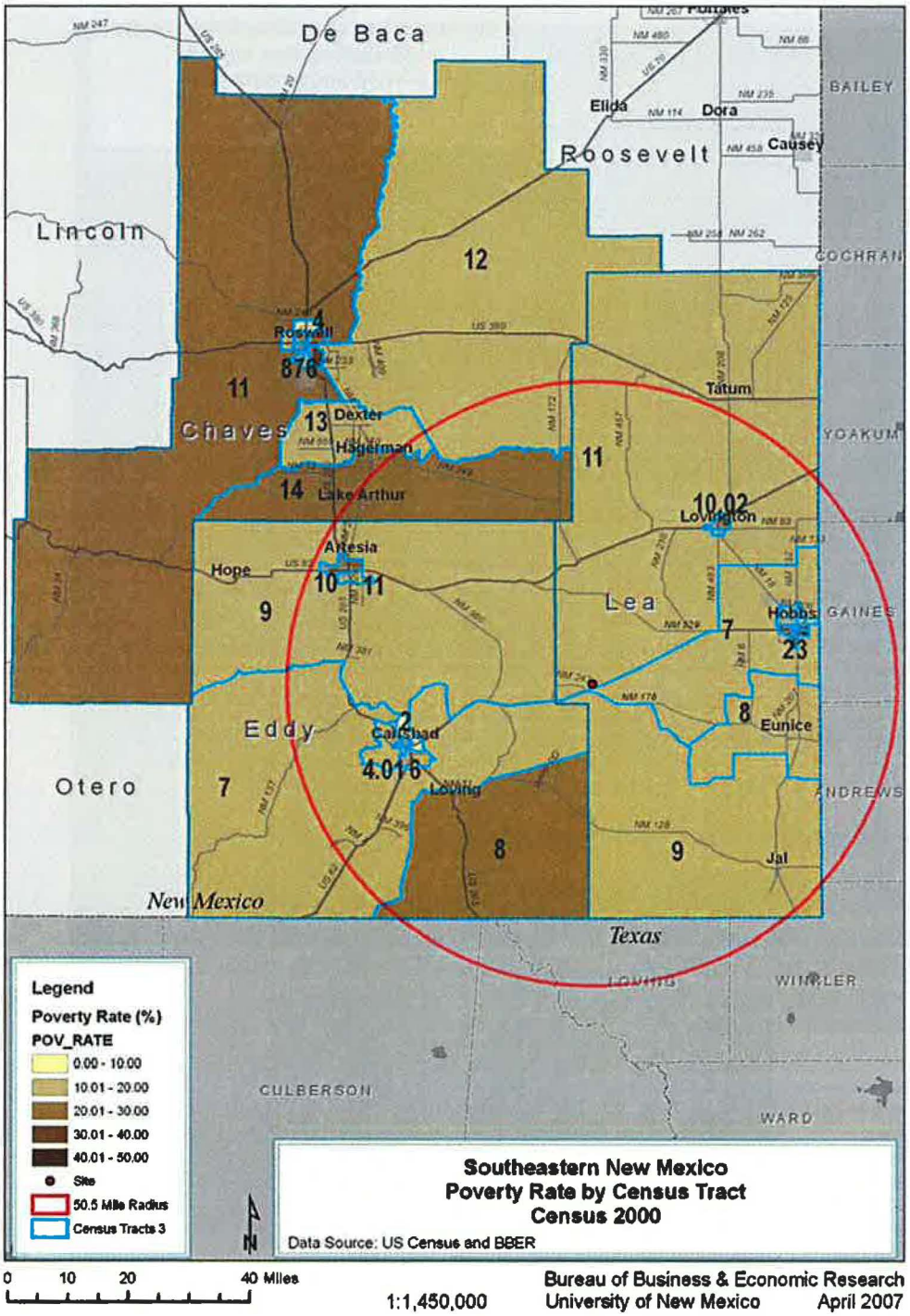


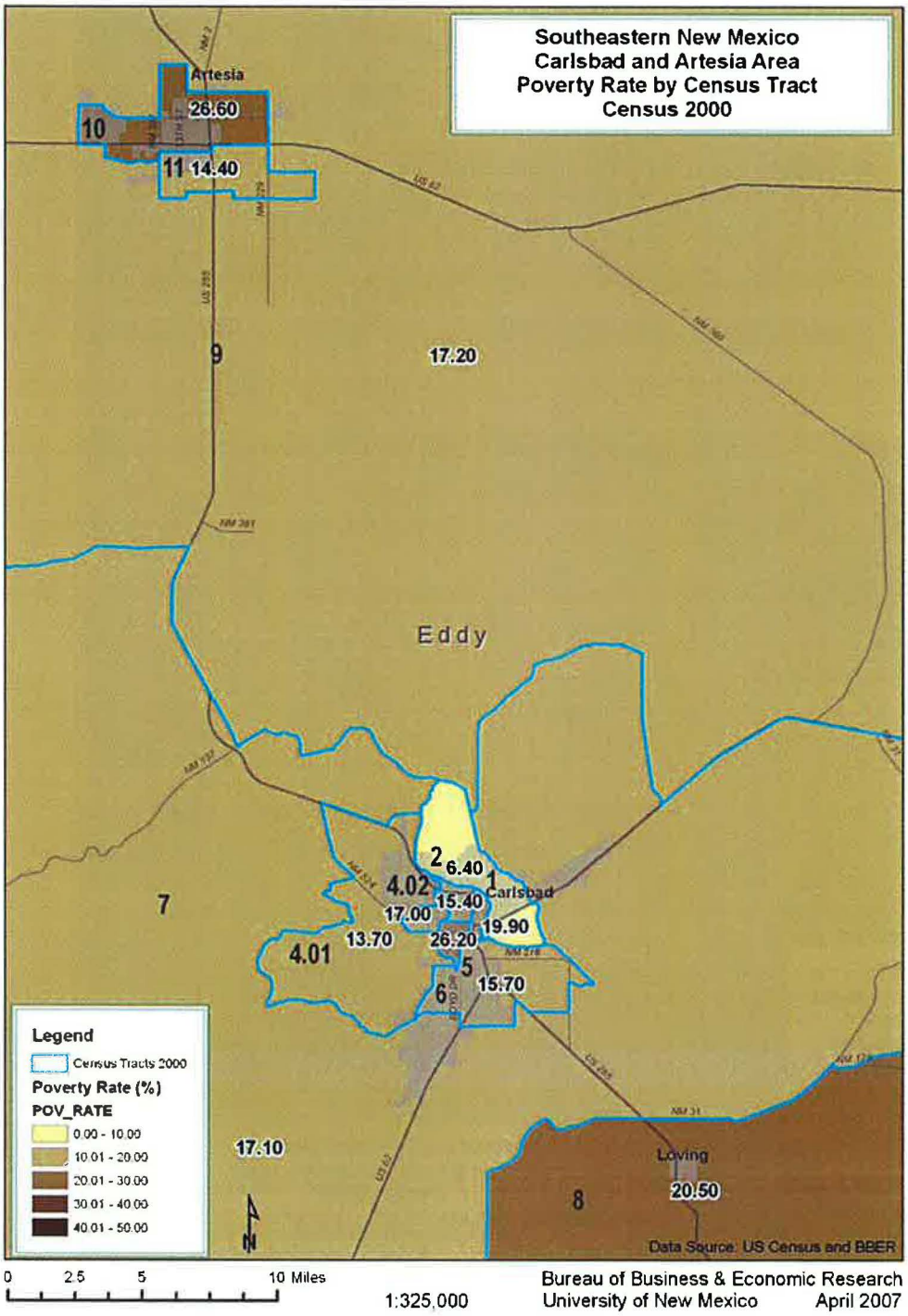
Table 30
Study Area Poverty Rate, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)

Study Area	Total Population for whom poverty status is determined	Number of Poor People	Poverty Rate
Chaves County	***60,087***	***12,778***	***21.3***
Census Tract 12	1,766	196	11.1
Census Tract 13	2,767	482	17.4
Census Tract 14	2,532	656	25.9
Total	**7,065**	**1,334**	**18.9**
	Eddy County		
Census Tract 1	1,350	269	25.0
Census Tract 2	4,307	276	7.0
Census Tract 3	5,258	810	20.3
Census Tract 4.01	3,411	466	15.3
Census Tract 4.02	4,336	738	22.3
Census Tract 5	3,319	870	40.7
Census Tract 6	5,506	865	16.0
Census Tract 7	5,015	857	22.4
Census Tract 8	2,073	425	24.5
Census Tract 9	4,409	758	21.2
Census Tract 10	5,859	1,561	30.6
Census Tract 11	6,065	874	19.8
Total	**50,908**	**8,769**	**22.0**
	Lea County		
Census Tract 1	2,470	824	45.4
Census Tract 2	2,979	1,027	44.7
Census Tract 3	3,290	1,481	53.1
Census Tract 4	2,441	975	49.4
Census Tract 5.01	6,089	699	14.2
Census Tract 5.02	5,538	1,105	28.4
Census Tract 6	5,730	721	17.7
Census Tract 7	6,556	814	17.7
Census Tract 8	2,891	465	20.9
Census Tract 9	2,114	379	28.6
Census Tract 10.02	5,990	1,449	32.7
Census Tract 10.03	3,623	659	22.4
Census Tract 11	3,971	719	22.2
Total	**53,682**	**11,317**	**28.5**
Study Area	111,655	21,420	**25.4**

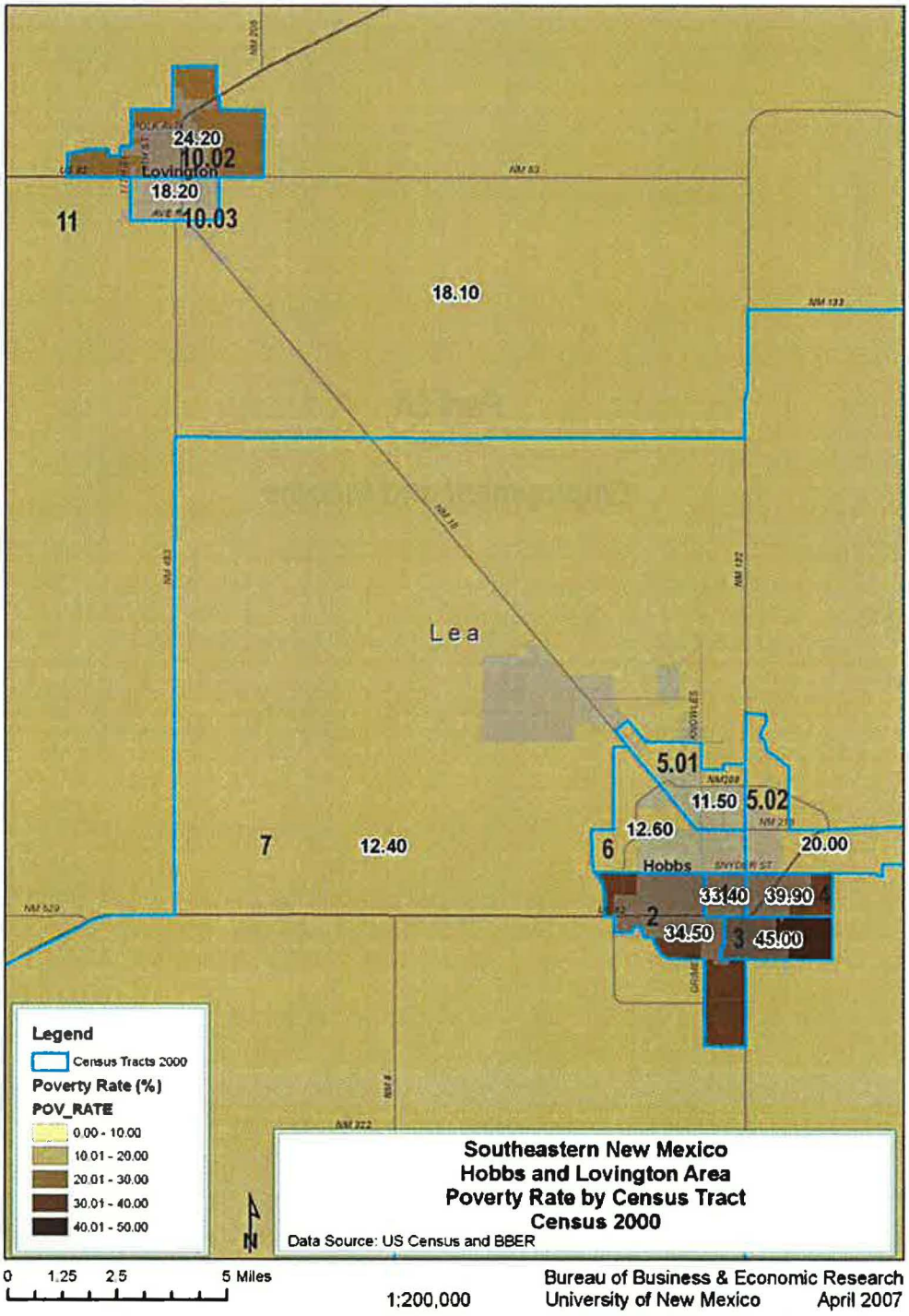
Map 21
Poverty Status, by Census Tract: Census 2000
(Source: Census 2000 Summary File 4)



Map 22
Carlsbad and Artesia Poverty Rate, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)



Map 23
Hobbs and Lovington Poverty Rate, by Census Tract: Census 2000
(Source: Census 2000 Summary File 3)



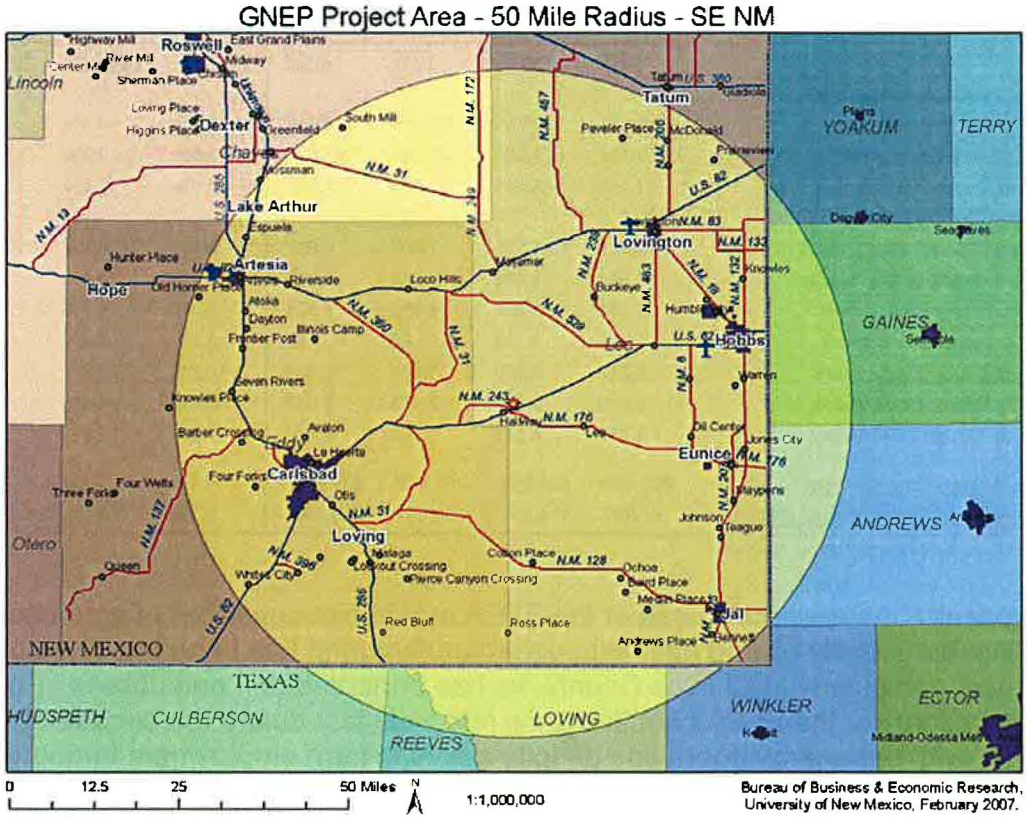
Part 2A

Employment and Income

ECONOMY OF THE REGION SURROUNDING THE ELEA PROPOSED SITE

The economic region surrounding the ELEA proposed site includes all those counties that lie within a 50 mile radius of the proposed site. The area, as depicted in Figure 1, contains significant proportions of Lea and Eddy Counties, a corner of Chaves County, and relatively small fractions of 7 Texas counties, specifically Yoakum, Gaines, Andrews, Winkler, Loving, Reeves, and Culberson. The major cities within 50 miles are Hobbs in Lea County and Carlsbad in Eddy County. Roswell, the major city in Chaves County and the largest of the three, is some 20 miles to the northwest. Other cities within a 50 mile radius with a population above or approaching 10,000 are Artesia in Eddy County and Lovington in Lea County. There are no Texas cities even of this size within 50 miles of the site.

Figure 1. Economic Region Surrounding ELEA Proposed Site



The areas surrounding Carlsbad-Artesia, Hobbs, and Roswell are each classified as Micropolitan Areas. The BEA publishes data for Micropolitan areas, but in the three cases, the boundaries, and hence the data, are identical with the respective county in which the city(ies) are located. While the three New Mexico counties are thus considered to be micropolitan areas, the seven Texas counties are all rural counties, with low population density and limited economic activity.

HISTORICAL TRENDS

Table 1 presents historical data by decade on total employment for Eddy, Lea and Chavez Counties and for each of the 7 Texas and offers a comparison with New Mexico and the US. The figures on total employment include full- and part-time wage and salary workers and those who are self-employed as farm and non-farm proprietors. The figures on employment growth are the calculated compound annual rates of growth over the decade. The details on employment by SIC industry for each of the counties, with comparison data for New Mexico and the US may be found in Appendix A. More recent data on wage and salary employment will be discussed below.

Table 1. Historical Employment for Counties Within 50 Miles of the Eddy-Lea Energy Alliance Site

	Total Employment				Annual % Growth by Decade		
	1970	1980	1990	2000	1970-80	1980-90	1990-00
New Mexico Counties							
Lea County Employment	21,061	29,765	27,419	28,469	3.5%	-0.8%	0.4%
Eddy County Employment	16,188	21,689	22,143	25,530	3.0%	0.2%	1.4%
Chaves County Employment	17,142	23,088	27,098	28,017	3.0%	1.6%	0.3%
Texas Counties							
Andrews County Employment	4,737	6,596	7,080	6,017	3.4%	0.7%	-1.6%
Culberson County Employment	1,871	1,884	1,744	1,391	0.1%	-0.8%	-2.2%
Gaines County Employment	5,151	6,465	6,092	7,321	2.3%	-0.6%	1.9%
Loving County Employment	102	132	95	98	2.6%	-3.2%	0.3%
Reeves County Employment	6,087	5,970	5,888	6,469	-0.2%	-0.1%	0.9%
Winkler County Employment	3,938	3,818	3,428	3,048	-0.3%	-1.1%	-1.2%
Yoakum County Employment	3,751	4,218	4,963	4,190	1.2%	1.6%	-1.7%
New Mexico Employment	398,899	598,199	767,139	972,954	4.1%	2.5%	2.4%
United State Employment (000s)	91,282	114,231	139,381	166,759	2.3%	2.0%	1.8%

Source: US Bureau of Economic Analysis

Historically, the economic base of the ELEA region has consisted of agriculture and mining, particularly oil and gas, although manufacturing has been of some consequence, particularly in Chaves County, as has transportation and utilities. Employment in some of the ELEA counties grew relatively fast during the decade of the 1970's with the energy boom and despite a loss in farm employment throughout the area. Mining provided more than 20% of the employment in Lea and Eddy counties in 1980 and 19% in the 7 Texas counties. The collapse of energy prices in the 1980's shut down some wells and many oil and gas exploration and drilling activities throughout the Permian basin, resulting in cutbacks in mining employment. This development combined with a further shrinking of farm employment meant that many of the ELEA counties actually lost employment during the 1980's. Chaves County, which gained employment in both manufacturing and mining over the decade was a notable exception, with compound annual employment growth of 1.6%. Yoakum County, which also gained mining employment over the decade, had annual em-

ployment growth of 1.6%. During the decade of the 1980's, the compound annual rate of employment was 2.5% for New Mexico and 2.0% for the US.

The decade of the 1990's similarly passed the region by. While New Mexico had compound annual growth in employment of 2.4% and the US, of 1.8%, as a group the Texas counties lost 0.3% of their employment over the decade as employment in the mining sector shrank 5.0%, losing over 2000 jobs. Mining employment also fell in each of the three New Mexico counties, but each showed employment gains over the decade. In Lea and Chaves counties, the gains were modest: a 0.4% pick-up in Lea County and a 0.3% in Chaves. Eddy county employment showed annual growth of 1.4%. Contributing to this growth, the Waste Isolation Pilot Plant was built and began receiving shipments in 1999.

RECENT ECONOMIC PERFORMANCE

Employment and Earnings

Table 2 below provides recent data on the performance of wage and salary employment by sector in the three New Mexico counties in the ELEA region. The compound annual rate of private sector employment growth from 2001 to 2005 was an impressive 3% in Lea County, but much more modest in Chaves and Eddy counties. Growth has accelerated over the past couple years, however, with private sector employment growth in the four quarters ending with the third quarter of 2006 up in Lea, Chaves and Eddy counties respectively by 6%, 5% and 4%. Particularly in Lea County, but also in Chaves and Eddy counties, much of the growth is related to oil and gas, but there have been a number of positive developments in other sectors. Chaves County saw the re-opening of its bus plant under Millennium, although the latest reports indicate at least a temporary shutdown of that facility.

Table 3 provides data on total private sector employment growth in the 7 Texas Counties in the ELEA region. Note the very rapid recent growth in Andrews, Winkler and Yoakum Counties, which all have significant oil and gas activity. (See discussion below.)

Table 2. Recent Wage and Salary Employment by Sector in Chaves, Eddy and Lea Counties (4 Q Figures through 2006 Q3)

	CHAVES COUNTY				EDDY COUNTY				LEA COUNTY			
Industry	Ave Emp 2005	% of Total	Annual Growth 2001-05	4 Q's	Ave Emp 2005	% of Total	Annual Growth 2001-05	4 Q's	Ave Emp 2005	% of Total	Annual Growth 2001-05	4 Q's
Agric, forest, fishing & hunting	1,508	7%	-2%	2%	361	2%	-1%	-7%	417	2%	2%	-2%
Mining	524	2%	0%	7%	2,820	14%	2%	9%	5,387	21%	3%	18%
Utilities	58	0%	-12%	22%	122	1%	-2%	1%	242	1%	0%	-1%
Construction	979	5%	3%	17%	1,058	5%	-1%	8%	1,687	7%	0%	5%
Manufacturing	1,136	5%	-14%	11%	783	4%	-1%	-9%	339	1%	-2%	99%
Wholesale trade	728	3%	-1%	-9%	471	2%	1%	0%	930	4%	-3%	15%
Retail trade	2,725	13%	4%	2%	2,117	10%	-2%	6%	2,719	11%	0%	-1%
Transportation & warehousing	811	4%	10%		787	4%	1% *		915	4%	3%	20%
Information	244	1%	-1%	3%	242	1%	-6%	2%	246	1%	2%	6%
Finance & insurance	586	3%	5%	4%	587	3%	4%	5%	644	3%	5%	1%
Real estate & rental & leasing	205	1%	1%	11%	406	2%	5%	2%	406	2%	9%	-3%
Professional & tech'l services	511	2%	-1%	37%	515	3%	10%	-11%	373	1%	8%	7%
Mgt companies & enterprises	43	0%	-4%	18%	178	1%	48% *		*			*
Admin & waste services	251	1%	-3%	18%	1,395	7%	2%	23%	1,457	6%	8%	-7%
Educational services	15	0%	4%	78%	41	0%	7%	5%	*			*
Health care & social assist	3,148	15%	6%	9%	2,251	11%	3%	-1%	2,826	11%	3%	2%
Arts, entertain & recreation	165	1%	-3%	0%	81	0%	1%	-28%	*			*
Accom & food services	2,505	12%	-1%	1%	1,746	9%	0%	3%	1,833	7%	6%	4%
Other services	568	3%	0%	9%	833	4%	1%	-1%	871	3%	7% *	
Non-classifiable	*				*				21	0%		*
Total private sector	**16,715**	**79%**	**0%**	**5%**	**16,802**	**83%**	**1%**	**4%**	**21,935**	**87%**	**3%**	**6%**
Public administration	4,403	21%	0%	1%	3,436	17%	1%	1%	3,384	13%	-1%	-1%
Federal	329	2%	-3%	0%	596	3%	4%	8%	114	0%	-2%	-3%
State	1,544	7%	1%	3%	605	3%	2%	0%	285	1%	1%	0%
Local	2,531	12%	0%	0%	2,234	11%	0%	0%	2,985	12%	-1%	-1%
Grand total	21,118	100%	0%	4%	20,238	100%	1%	4%	25,319	100%	2%	5%

Note: 4 quarter growth is for the latest 4 quarters available, those ending with the third quarter of 2006 over the same quarters a year earlier.

Source: NM Dept of Labor, Quarterly Census of Employment

Table 3: Private Sector Wage and Salary Employment, 7 Texas Counties

	Andrews	Culberson	Gaines	Loving	Reeves	Winkler	Yoacum
2001	3,254	630	3,171	49	3,397	1,477	2,089
2002	3,287	645	3,165	43	3,378	1,479	2,101
2003	3,288	647	3,213	35	3,241	1,481	2,086
2004	3,291	652	3,302	26	2,930	1,458	2,075
2005	3,299	647	3,371	17	2,779	1,432	2,088
Growth 200	3.3%	2.7%	4.3%	-29.9%	-10.0%	1.3%	2.3%
Latest 4 Q	13.5%	5.3%	-2.7%	-46.8%	-5.6%	8.0%	6.7%

Texas Workforce Commission, Labor Market and Career Information Department, Quarterly Census of Employment and Wages by County, 2001-06Q3. http://www.tracer2.com/

Sector employment shares for the New Mexico counties in 2005 are calculated Table 2. Often more revealing of a sector's importance is the sector's share of total com-

pensation. Data on sector shares of compensation in 2005 is given in Table 4. For purposes of comparison, the data for the US is also provided.

Table 4. Percent Compensation by Industry, ELEA Region Counties & US, 2005

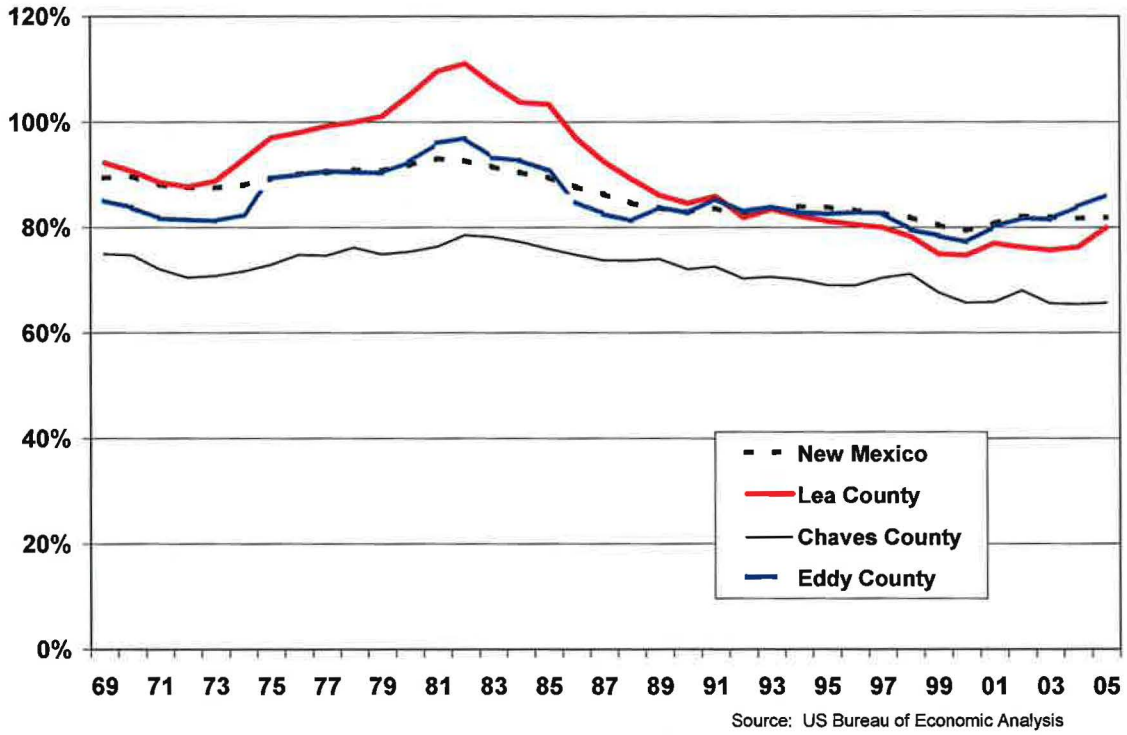
	New Mexico Counties			Texas Counties							US
	Chaves	Eddy	Lea	Andrews	Culbers	Gaines	Loving	Reeves	Winkler	Yoakum	
Private Sector	72%	79%	86%	79%	50%	76%	65%	52%	78%	81%	81%
Farm compensation	5%	2%	1%	1%	3%	11%	5%	3%	0%	4%	0%
Forestry, fishing, related	1%	0%	0%	(D)	(D)	14%	(D)	1%	(D)	5%	0%
Mining	3%	22%	32%	28%	7%	18%	(D)	9%	41%	40%	1%
Utilities	0%	1%	2%	2%	(D)	1%	0%	2%	2%	3%	1%
Construction	5%	5%	7%	10%	(D)	4%	0%	2%	(D)	6%	6%
Manufacturing	6%	5%	1%	6%	(D)	1%	(D)	3%	(D)	3%	13%
Wholesale trade	4%	3%	5%	5%	(D)	9%	(D)	1%	3%	3%	6%
Retail trade	9%	6%	7%	4%	15%	5%	0%	10%	4%	3%	7%
Transportation & warehousing	4%	4%	5%	3%	3%	2%	0%	3%	11%	6%	3%
Information	1%	1%	1%	0%	0%	1%	0%	0%	(D)	0%	3%
Finance and insurance	4%	3%	3%	3%	(D)	3%	0%	4%	2%	1%	8%
Real estate & rental & leasing	1%	2%	2%	2%	(D)	0%	0%	0%	3%	1%	1%
Professional & technical	3%	3%	2%	3%	(D)	(D)	(D)	3%	0%	(D)	8%
Mgt of companies & enterprises	0%	1%	0%	(D)	0%	0%	0%	0%	(D)	(D)	3%
Admin and waste services	1%	8%	3%	(D)	0%	(D)	0%	1%	(D)	(D)	4%
Educational services	0%	0%	(D)	0%	0%	0%	0%	0%	0%	0%	1%
Health care & social assistance	16%	9%	(D)	2%	(D)	1%	0%	3%	1%	0%	9%
Arts, entertain, & recreation	0%	0%	1%	(D)	0%	0%	0%	(D)	(D)	(D)	1%
Accommodation & food services	4%	3%	2%	(D)	7%	1%	0%	(D)	(D)	(D)	3%
Accommodation	0%	1%	0%	(D)	3%	(D)	0%	(D)	(D)	(D)	1%
Food services & drinking places	4%	2%	2%	3%	4%	(D)	0%	2%	1%	1%	2%
Other services	3%	3%	4%	3%	2%	3%	(D)	5%	3%	2%	3%
Government	28%	21%	14%	21%	50%	24%	35%	48%	22%	19%	19%
Federal, civilian	4%	6%	1%	1%	15%	1%	4%	5%	1%	1%	4%
Military	1%	1%	1%	1%	1%	1%	(D)	1%	1%	0%	2%
State government	10%	3%	1%	1%	7%	1%	(D)	3%	1%	1%	4%
Local government	14%	11%	11%	19%	27%	22%	(D)	39%	20%	17%	10%

Source: US Bureau of Economic Analysis

The table indicates the importance of certain sectors, particularly mining and the farm sector, to total county compensation. The mining activity is predominately oil and gas, although other mining activities take on importance in some counties (e.g., potash in Eddy County). Transportation is another sector that accounts for a disproportionately large share of total income in some of the ELEA counties. Much of this is truck transportation and may be linked to oil and gas activity. Rail accounts for 3% of total compensation in Culberson; pipelines for 8% in Winkler and 1% respectively for Eddy and Lea counties. The government sector has a very large presence in some of the counties, most notably Culberson and Reeves where it is at or near 50%, but accounts for only 14% of total compensation in Lea County.

Figure 2 looks at average wages in Chaves, Lea and Eddy counties each as a percent of the average wage in the US annually over the period 1969 to 2005, and offers a comparison with New Mexico. These counties have all lost ground in terms of wages since the heyday of the energy boom in the early 1980's. Average wages in Lea and Eddy County and in New Mexico as a whole are today roughly 80% of the US. In Chaves County the average wage was 66% of the US average in 2005.

Figure 3. Average Wage as a Percent of the US: Chaves, Lea and Eddy Counties and New Mexico



Source: US Bureau of Economic Analysis

Table 5 presents data on the seven Texas counties in 2005, again showing the average wage in each county as a percent of the US. By this measure, the seven Texas counties show considerable variation. Average Wages in Andrews, Loving, Winkler and Yoakum Counties were in the neighborhood of 90% of the average US wage in 2005, while Gaines was closer to 70%, Reeves to 60% and Culbertson was 55%.

Table 5. ELEA Texas Counties' Average Wages as a Percent of the US

	2001	2002	2003	2004	2005
Andrews	83%	81%	82%	84%	87%
Culberson	54%	54%	55%	56%	55%
Gaines	70%	71%	70%	72%	73%
Loving	45%	48%	58%	69%	92%
Reeves	51%	56%	57%	58%	60%
Winkler	78%	76%	81%	84%	88%
Yoakum	80%	79%	82%	96%	90%

Source: US Bureau of Economic Analysis

As labor markets in the area have tightened with the latest energy boom, wages have been increasing, particularly for people to work in the oil fields. Figure 6 reports the

average weekly wages across industries for Lea County wage and salary employees in the third quarter of 2006. Figures 7 presents similar data for Eddy County.

Figure 4. Average Weekly Wages of Lea County Employees, 2006 Q3

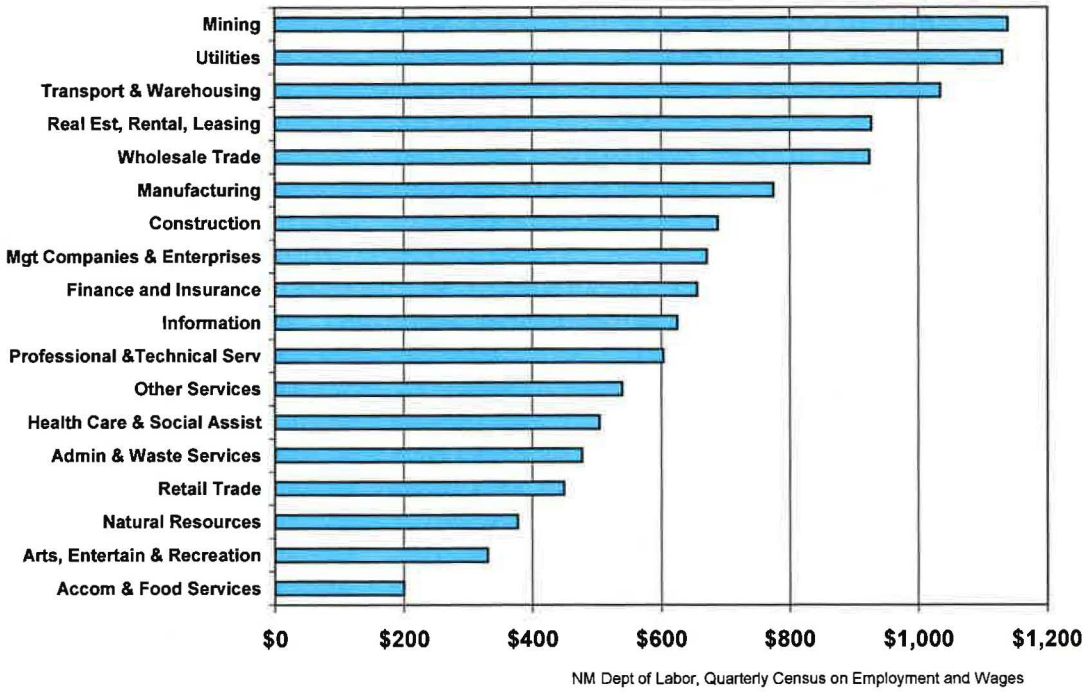


Figure 5. Average Weekly Wages of Eddy County Employees, 2006 Q3

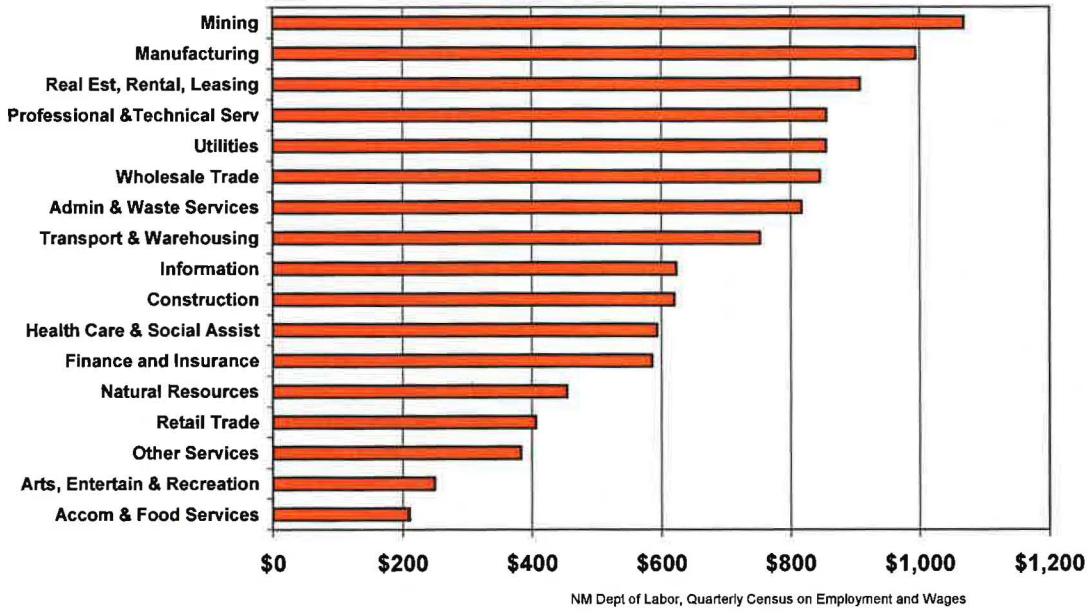


Table 8 reports the average increases for the four quarters ending with the third quarter of 2006 over the same period a year earlier. Particularly in Lea County, the en-

ergy boom particularly has put enormous upward pressure on wages in the mining sectors, particularly support services and on the transportation and wholesale trade sectors, which also service the oil fields. The oil fields are affectively sucking labor out of other sectors, which cannot match the wages paid to workers with typically at most a high school education.[1] The demand is so great that workers have many opportunities to work overtime, so the increase in average weekly wages reflects both increases in hourly earnings and in the average hours worked. On an annual basis, the increase in wages in the mining sector would amount to more than $8,000. The fact that so many sectors are evidencing large increases in wages may speak to how a labor shortage is pushing up wages throughout the economy.

Figure 6. Year-on-Year Increases in Average Weekly Wages, Lea County Employees, 4 Quarters Ending 2006 Q3

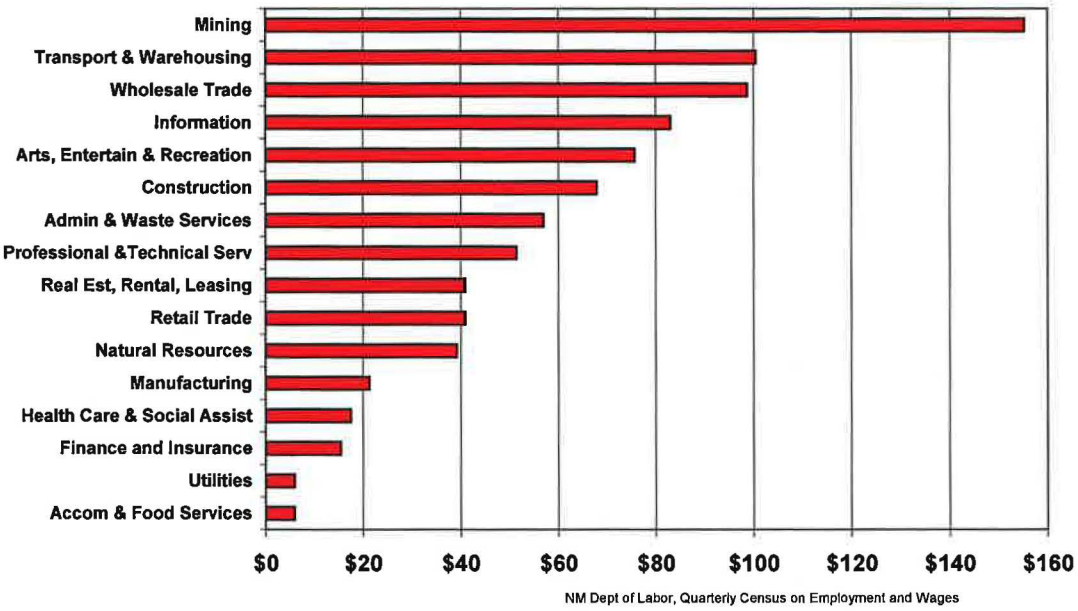
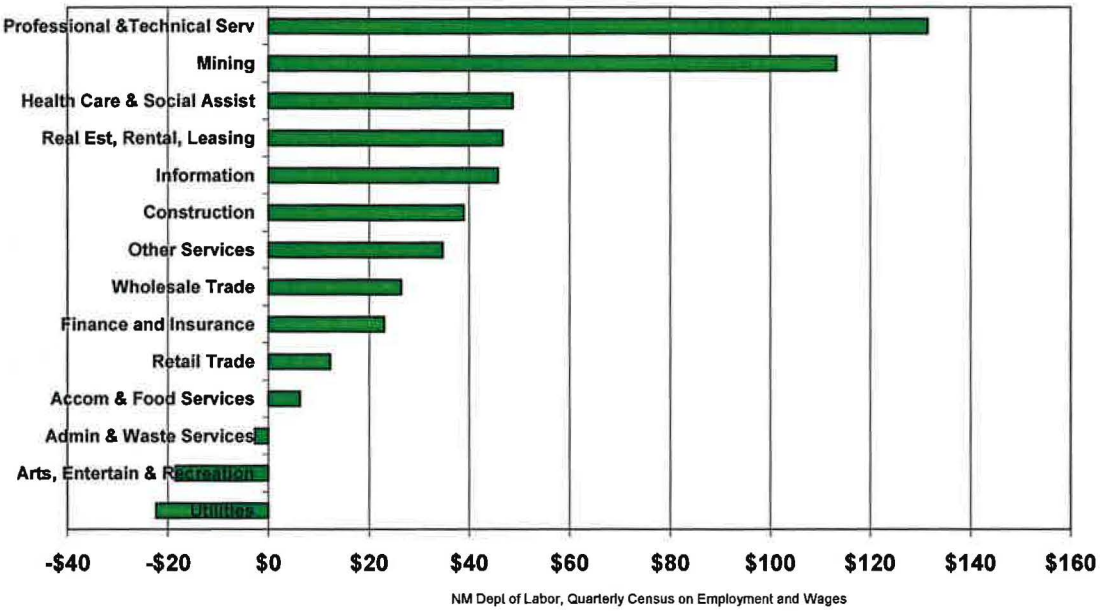


Figure 9 reports similar data for Eddy County. Note that professional and technical services had the largest increase ($132 per week), while mining was second at $113 – well below the $155 gain in Lea County. Mining – oil, gas and potash – is important in Eddy County, but there are other important growth areas. Some of these industries have been spawned by the WIPP Project. Lea county may have such opportunities in the future – with LES and with GNEP – but these projects are in their infancy compared to WIPP.

[1] According to data compiled by the US Bureau of Labor Statistics, the top five jobs nationwide in support services for oil and gas, accounting for 38% of total employment, are roustabouts, service unit operators, rotary drill operators, helpers, and derrick operators. 77 to 79% of the workers in these jobs have a high school degree or less.

Figure 7. Year-on-Year Increases in Average Weekly Wages, Lea County Employees, 4 Quarters Ending 2006 Q3



Taxable Gross Receipts

Table 6a and **6b** provide detailed data by NAICS 3-digit industries on the taxable gross receipts reported for respectively Eddy and Lea counties and for the major municipality(ies) within each county.[2] **Table 6a** presents the data for Eddy County, Carlsbad and Artesia. Note that over the 5-year period, 2002 to 2006, Eddy County taxable gross receipts grew at a compound annual rate of 16.1%, while the annual rate of growth in 2006 was an impressive 25.6%. Major contributions to this growth came from mining and mining services, construction, wholesale trade and transportation, all sectors that may have been affected by the oil boom and from improved markets for potash[3], which is also mined in Eddy County, but retail trade was extremely strong, as was real estate in 2006 and other services. Industry codes are self-reported and the other services category is known to include receipts from a wide variety of service industries.

Growth in taxable gross receipts for Carlsbad were somewhat less impressive, a 6.9% compound annual rate over the period 2002 – 06, with annual growth of 8.9%

---

[2] The figures in the table for 2005 and 2006 have been adjusted to add back in the amounts of the deductions for food sold in stores and for medical services that went into effect on January 1, 2005. The annual figures are based on activity months, not distribution months, so Christmas sales, which primarily affect December activity, will be reflected in the calendar year in which those sales were made, i.e., 2005, if in sales were made in December 2005.

[3] See 2007 article entitled "High and Rising" by Allen Artutuck, http://magazine.globeinvestor.com/servlet/ArticleNews/commentarystory/GIGOLD/20050706/magallentuck0706/GIGOLDMAG/home

Table 6a. Taxable Gross Receipts, Calendar 2002-06, Eddy County and Cities

Calendar Years	Thousands of Dollars					% Annual Growth	
	2002	2003	2004	2005	2006	2002-06	2005-06
EDDY COUNTY							
Agriculture, Forestry, Fishing & Hunting	*	2,820	3,611	5,409	5,896	*	9.0%
Mining & Oil and Gas Extraction	105,998	141,687	165,010	247,914	416,371	40.8%	67.9%
Utilities	110,270	#VALUE!	101,924	115,640	124,942	3.2%	8.0%
Construction	110,270	135,434	113,838	161,141	217,961	18.6%	35.3%
Manufacturing	30,954	34,796	31,684	37,177	46,554	10.7%	25.2%
Wholesale Trade	79,997	90,496	84,999	135,874	144,499	15.9%	6.3%
Retail Trade	278,789	318,416	408,178	433,813	513,701	16.5%	18.4%
Transportation and Warehousing	-	27,052	29,799	46,698	56,367	*	20.7%
Information and Cultural Industries	-	21,770	23,245	23,421	23,600	*	0.8%
Finance and Insurance	5,692	4,791	5,859	5,993	5,989	1.3%	-0.1%
Real Estate and Rental and Leasing	18,671	5,411	5,778	7,078	11,357	-11.7%	60.4%
Professional, Scientific & Technical Services	*	52,087	58,621	84,427	85,163	*	0.9%
Management of Companies and Enterprises	113	*	90	*	*	*	*
Admin and Support, Waste Mgt	*	*	517	1,369	3,129	*	128.6%
Educational Services	*	*	34	*	338	*	*
Health Care and Social Assistance	*	44,711	64,837	53,741	54,957	*	2.3%
Arts, Entertainment and Recreation	*	473	593	527	423	*	-19.8%
Accommodation and Food Services	*	48,210	54,502	62,108	63,444	*	2.2%
Total of above five categories, 2002	81,035					10.8%	
Other Services (except Public Admin)	286,183	274,606	241,588	298,502	384,540	7.7%	28.8%
Unclassified Establishments	*	3,137	399	677	1,947	*	187.5%
Totals	1,189,132	1,301,296	1,395,109	1,717,906	2,161,508	16.1%	25.8%
CARLSBAD							
Agriculture, Forestry, Fishing & Hunting	*	*	*	295	*	*	*
Mining & Oil and Gas Extraction	9,847	8,105	14,270	18,928	25,112	26.4%	32.7%
Utilities	*	*	19,206	21,895	22,746	*	3.9%
Construction	29,550	31,966	30,218	34,563	45,305	11.3%	31.1%
Manufacturing	10,327	10,993	12,071	13,971	19,103	16.6%	36.7%
Wholesale Trade	21,847	18,434	19,740	25,403	22,787	1.1%	-10.3%
Retail Trade	185,218	178,433	200,104	214,350	222,426	4.7%	3.8%
Transportation and Warehousing	*	8,662	6,865	16,577	18,072	0.0%	9.0%
Information and Cultural Industries	*	9,177	10,181	10,267	10,427	0.0%	1.6%
Finance and Insurance	*	2,946	3,777	3,680	3,546	0.0%	-3.6%
Real Estate and Rental and Leasing	2,481	2,938	3,255	4,212	6,073	25.1%	44.2%
Professional, Scientific & Technical Services	*	31,124	29,112	33,897	42,011	*	23.9%
Management of Companies and Enterprises	*	*	*	*	*	*	*
Admin and Support, Waste Mgt	*	*	216	686	1,531	*	123.3%
Educational Services	*	84	136	30	*	*	0.0%
Health Care and Social Assistance	*	38,223	58,942	49,805	50,132	*	0.7%
Arts, Entertainment and Recreation	*	*	217	191	129	*	-32.8%
Accommodation and Food Services	*	32,924	38,453	40,168	44,657	*	11.2%
Total of above five categories, 2002	61,404					12.0%	
Other Services (except Public Admin)	-	81,831	88,087	84,558	86,016	*	1.7%
Unclassified Establishments	*	896	272	211	1,603	*	661.0%
Totals	475,699	474,878	535,246	573,824	621,994	6.9%	8.4%
ARTESIA							
Agriculture, Forestry, Fishing and Hunting	*	*	2,780	2,572	1,622	*	-36.9%
Mining and Oil and Gas Extraction	11,433	16,486	22,354	24,297	47,481	42.8%	95.4%
Utilities	*	14,390	18,642	21,593	24,698	*	14.4%
Construction	38,002	54,505	29,809	55,247	75,855	18.9%	37.3%
Manufacturing	8,385	7,514	4,968	7,275	12,818	11.2%	76.2%
Wholesale Trade	34,413	41,149	26,408	59,479	65,957	17.7%	10.9%
Retail Trade	*	75,564	86,138	109,458	129,746	*	18.5%
Transportation and Warehousing	*	2,528	3,993	5,039	5,450	*	8.2%
Information and Cultural Industries	*	7,117	8,589	8,015	8,303	*	3.6%
Finance and Insurance	*	1,589	2,023	2,198	2,307	*	5.0%
Real Estate and Rental and Leasing	15,973	1,963	1,805	1,967	2,382	-37.9%	21.1%
Professional, Scientific and Technical Services	*	13,323	14,095	28,837	26,034	*	-9.7%
Management of Companies and Enterprises	*	*	*	*	*	*	*
Admin and Support, Waste Mgt	*	*	146	686	1,364	*	99.0%
Educational Services	*	*	*	41	*	*	*
Health Care and Social Assistance	*	4,396	5,888	3,912	4,807	*	22.9%
Arts, Entertainment and Recreation	*	*	*	66	*	*	*
Accommodation and Food Services	*	11,764	15,102	16,845	16,930	*	0.5%
Other Services (except Public Admin)	33,233	22,882	34,356	40,399	45,238	8.0%	12.0%
Unclassified Establishments	*	*	*	*	*	*	*
Totals	278,324	283,387	277,315	388,461	471,950	14.1%	21.5%

Source of data: New Mexico Taxation and Revenue Department, Report 80, Quarterly and Revised Quarterly from Monthly Reports

in 2006. The slower growth of receipts in Carlsbad undoubtedly reflects the fact that mining activity within the city limits is relatively small. Outside of mining, Carlsbad had strong growth in taxable gross receipts from construction, manufacturing, and real estate in both periods and in information, professional and business services and accommodations and food service in 2006. Retail trade was relatively subdued.

Between 2002 and 2006, Artesia experienced compound annual growth in total taxable receipts of 14.1%, accelerating to 21.5% in 2006. Mining receipts almost doubled in 2006, but there were also substantial gains in construction and manufacturing, in real estate, and in retail trade.

Table 6b presents the data for Lea County and Hobbs. Note that over the 5-year period, 2002 to 2006, Lea County taxable gross receipts grew at a compound annual rate of 20.4%, the same rate incidentally that they grew in 2006. A number of sectors contributed to this spectacular growth: mining, which for Lea County is primarily oil and mining support services, construction, manufacturing, wholesale trade, transportation and warehousing, real estate, and other services, which, since the data are self-reported, includes many different service industries and may include retail. Many of those industries which reported large increases in taxable receipts are related to oil and gas, e.g., construction, wholesale trade and transportation. Retail taxable receipts increased at impressive rates, undoubtedly reflecting at least in part the oil boom in the Permian basin.

The figures for Hobbs indicate compound annual growth 2002 to 06 of 17.8%, with growth in 2006 of 19.3%. Hobbs is at the epicenter of the oil boom, but oil is not the only thing happening in Hobbs. Among other important industries, Hobbs has a very large retail trade sector, which accounts for more than three-quarters of Lea County receipts from this sector. Hobbs has long served as the market center for the larger area, which includes the counties across the border in West Texas. **Figure 8** charts taxable receipts from retail trade (SIC definition) separately for Lea County, Eddy, Chaves and Roosevelt Counties, the Texas rural counties that surround Lea County and the three urban Texas counties (Lubbock, Midland, and Ector, which includes Odessa). The numbers are all indexed back to 1995. Note the continued and growing dominance of Lea County – primarily, Hobbs.

As part of our contract with the New Mexico Main Street Program, BBER has calculated pull factors for major industries in the largest New Mexico municipalities in southeast New Mexico. The pull factor for each industry in a particular community is hat community's taxable gross receipts from that industry per dollar of estimated income as a percent of New Mexico's taxable gross receipts from the same industry per dollar of New Mexico's estimated income. A result of more than one suggests that the community may be pulling in sales from elsewhere. **Table 7** reports the results of this analysis. Note that the pull factor for Hobbs for retail trade is the largest among those for the communities included in the analysis. Note that there are other industries in which Hobbs would appear to have a comparative advantage by this methodology, e.g., mining, although one has to be very careful in interpreting the

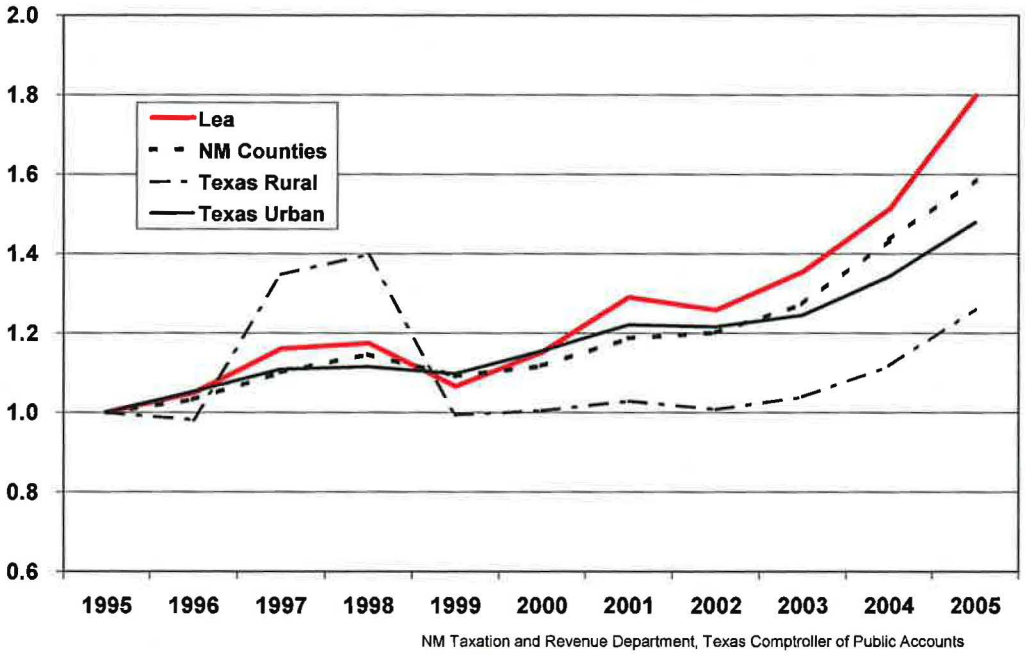
Table 6c. Taxable Gross Receipts, Calendar 2002-06, Lea County and Hobbs

Calendar Years	Thousands of Dollars					% Annual Growth	
	2002	2003	2004	2005	2006	2002-06	2005-06
LEA COUNTY							
Agriculture, Forestry, Fishing & Hunting	1,407	1,637	1,186	1,926	2,069	10.1%	7.4%
Mining & Oil and Gas Extraction	200,003	249,591	290,898	405,812	564,188	29.6%	39.0%
Utilities	93,555	128,136	119,802	148,182	157,833	14.0%	6.5%
Construction	110,342	141,407	189,027	243,426	287,725	27.1%	18.2%
Manufacturing	29,719	48,635	68,611	77,655	106,535	37.6%	37.2%
Wholesale Trade	78,960	110,259	86,723	147,407	162,452	19.8%	10.2%
Retail Trade	318,644	338,544	385,782	455,406	514,914	12.7%	13.1%
Transportation and Warehousing	15,085	13,690	24,929	29,358	45,921	32.1%	56.4%
Information and Cultural Industries	*	22,696	24,782	26,354	25,931	*	-1.6%
Finance and Insurance	5,150	4,460	5,140	4,837	5,685	2.5%	17.5%
Real Estate and Rental and Leasing	4,218	7,327	13,959	20,013	25,696	57.1%	28.4%
Professional, Scientific & Technical Services	*	20,322	33,896	53,371	50,707	*	-5.0%
Management of Companies and Enterprises	*	*	*	*	*	*	
Admin and Support, Waste Mgt	*	*	2,134	5,013	17,944	*	258.0%
Educational Services	*	321	1,417	763	799	*	4.8%
Health Care and Social Assistance	*	63,927	61,843	76,504	78,004	*	2.0%
Arts, Entertainment and Recreation	*	659	899	625	554	*	-11.2%
Accommodation and Food Services	*	47,958	55,483	66,221	74,700	*	12.8%
Total of above five categories, 2002	97,805	-	-	-	-	12.0%	
Other Services (except Public Admin)	74,606	283,983	322,865	418,043	503,439	61.2%	20.4%
Unclassified Establishments	*	1,837	451	107	727	*	579.3%
Totals	1,250,258	1,489,771	1,690,387	2,182,241	2,627,764	20.4%	20.4%
HOBBS							
Agriculture, Forestry, Fishing & Hunting	*	*	736	843	*	*	*
Mining & Oil and Gas Extraction	100,316	116,099	126,532	180,936	248,347	25.4%	37.3%
Utilities	*	*	28,239	39,500	42,405	*	7.4%
Construction	46,936	53,549	54,394	91,227	98,912	20.5%	8.4%
Manufacturing	13,254	21,658	34,868	45,204	65,028	48.8%	43.9%
Wholesale Trade	34,500	42,038	43,685	75,361	90,384	27.2%	19.9%
Retail Trade	250,827	263,434	297,515	357,200	391,756	11.8%	9.7%
Transportation and Warehousing	*	7,613	8,056	11,172	16,508	*	47.8%
Information and Cultural Industries	*	11,522	13,202	13,862	14,541	*	4.9%
Finance and Insurance	3,626	3,199	3,699	3,412	3,631	0.0%	6.4%
Real Estate and Rental and Leasing	3,434	5,773	11,679	17,202	23,255	61.3%	35.2%
Professional, Scientific & Technical Services	*	10,887	15,101	17,781	23,328	*	31.2%
Management of Companies and Enterprises	*	*	*	*	*	*	*
Admin and Support, Waste Mgt	*	*	1,415	2,151	4,421	*	105.6%
Educational Services	*	218	279	349	477	*	36.6%
Health Care and Social Assistance	*	52,785	55,907	70,478	71,309	*	1.2%
Arts, Entertainment and Recreation	*	497	834	595	449	*	-24.5%
Accommodation and Food Services	*	34,285	43,696	53,274	61,160	*	14.8%
Other Services (except Public Admin)	*	158,200	187,268	224,880	280,112	*	24.6%
Unclassified Establishments	*	1,276	*	*	*	*	*
Totals	747,428	812,189	927,390	1,205,528	1,437,810	17.8%	19.3%

Source of data: New Mexico Taxation and Revenue Department, Report 80, Quarterly and Revised Quarterly from Monthly Reports

data. For example, Hobbs is a medical center for the area, but it comparative importance is overstated by the fact that the Lea Regional Medical Center is a private for profit facility, while hospitals in other communities are government owned or private non-profit hospitals and not subject to the gross receipts tax.

Figure 9. Growth in Taxable Receipts from Retail Trade Indexed to 1995, Lea County and Surrounding Region



NM Taxation and Revenue Department, Texas Comptroller of Public Accounts

Table 7: Pull Factors for Major Cities in Southeast New Mexico, 2005

	ARTESIA	CARLSBAD	CLOVIS	HOBBS	PORTALES	ROSWELL
AGRIC, FORESTRY, FISHING & HUNTING	6.15	0.25	1.14	0.75	2.05	0.74
MINING	2.99	0.83		8.31		0.52
UTILITIES	2.26	0.81	1.17	1.54	1.47	0.94
CONSTRUCTION	1.82	0.41	0.80	1.12	0.64	0.70
MANUFACTURING	1.34	0.92	0.17	3.11	0.23	0.52
WHOLESALE TRADE	4.69	0.71	1.04	2.21	0.18	0.39
RETAIL TRADE	1.64	1.14	1.29	2.00	1.44	1.25
TRANSPORTATION AND WAREHOUSING	2.52	2.95	0.56	2.08	0.72	0.49
INFORMATION AND CULTURAL INDUSTRIES	1.82	0.83	1.47	1.17	0.97	0.99
FINANCE AND INSURANCE	1.66	0.99	0.71	0.96	1.23	1.74
REAL ESTATE AND RENTAL AND LEASING	0.59	0.45	0.56	1.91	0.32	0.53
PROF, SCIENTIFIC & TECHNICAL SERVICES	1.38	0.58	0.51	0.32	0.36	0.59
MGT OF COMPANIES & ENTERPRISES			1.91	0.04		
ADMIN & SUPPORT, WASTE MGT & REMED	0.73	0.25	0.27	0.85	0.12	0.29
EDUCATIONAL SERVICES	0.06	0.02	0.18	0.19		0.13
HEALTH CARE AND SOCIAL ASSISTANCE	0.38	1.70	1.41	2.52	0.34	1.58
ARTS, ENTERTAINMENT AND RECREATION	0.09	0.10	0.28	0.32	0.08	0.87
ACCOMMODATION AND FOOD SERVICES	1.21		1.41	1.43	1.12	1.00
OTHER SERVICES (EXCEPT PUBLIC ADMIN)	1.46	1.09	0.73	3.04	0.54	1.37
TOTAL	1.73	0.91	0.95	2.00	0.83	0.97

Source: New Mexico Taxation and Revenue Department, Report 80

LABOR FORCE

Table 8 presents the data on the labor force status of the population 16 and over in each of the ELEA counties in 2000. For comparative purposes, the data are also presented on New Mexico and the US. Of interest are the labor force participation rates. Where these rates are low, particularly relative to other counties in the area and to New Mexico and the US, labor force participation may have been discouraged by the lack of job opportunities.[4] Note that the male labor force participation rates was exceptionally low in Reeves County, Texas, and relatively low in Winkler, Lea and Chaves counties. With the exception of Culberson and tiny Loving counties, the female labor force participation rates were low across the region when compared either to New Mexico or the US, but particularly low in Gaines, Lea, and Winkler counties.

Table 9 pursues the analysis in Table 6 further by examining the data on those outside the labor force in an effort to determine how many of these individuals might constitute a hidden labor supply. A large percentage of both men (33% in Lea County to 44%in Eddy) and women (30 in across the Texas counties to 38% in Eddy) not in the labor force are over 65 years. There was also a relatively large percentage of young people, and particularly men 16-19 and 20-24, who were not in the labor force. Many of these young men may have been in school. Disability can restrict working. There were a number of men and women 16 to 64 who had disabilities and were not working. Finally, the need to care for children under 6 keeps some women out of the labor force. In all cases, however, the percentage of women not in the labor force with children under 6 was well under 10%. How big was the hidden labor force in 2000? By this methodology, and depending on geographic area, some 24% to 34% of the men and 27% to 34% of the women.

[4] To be counted in the civilian labor force one must either be working or actively seeking work. The unemployment rate thus only includes those who have not, for one reason or another, given up looking for work.

Table 8. Labor Force Status of Population 16 and Over, ELEA Counties, New Mexico, US, 2000

Employment Status	Lea	Eddy	Chaves	Andrews	Culberson	Gaines	Loving	Reeves	Winkler	Yoakum	New Mexico	US
Population 16 years and over	40,893	38,653	45,882	9,503	2,183	10,062	56	9,675	5,338	5,320	1,369,176	217,168,077
Males	20,223	18,542	21,960	4,545	1,082	4,876	25	5,149	2,577	2,564	663,095	104,982,282
In labor force	12,854	12,402	14,107	3,143	758	3,545	22	2,764	1,555	1,822	448,543	74,273,203
labor force participation rate	63.6%	66.9%	64.2%	69.2%	70.1%	72.7%	88.0%	53.7%	60.3%	71.1%	67.6%	70.7%
Civilian labor force	12,838	12,383	14,067	3,143	758	3,545	22	2,764	1,555	1,822	439,250	73,285,305
Employed	11,857	11,487	12,935	2,905	702	3,357	22	2,381	1,405	1,708	406,760	69,091,443
Unemployed	981	896	1,132	238	56	188	-	383	150	114	32,490	4,193,862
Unemployment Rate	7.6%	7.2%	8.0%	7.6%	7.4%	5.3%	0.0%	13.9%	9.6%	6.3%	7.4%	5.7%
Armed Forces	40	19	40	-	-	-	-	-	-	-	9,293	987,898
Not in labor force	7,369	6,140	7,853	1,402	324	1,331	3	2,385	1,022	742	214,552	30,709,079
Females	20,670	20,111	23,922	4,958	1,101	5,186	31	4,526	2,761	2,756	706,081	112,185,795
In labor force	9,448	9,702	11,254	2,368	619	2,231	20	2,066	1,235	1,330	386,089	64,547,732
labor force participation rate	45.7%	48.2%	47.0%	47.8%	56.2%	43.0%	64.5%	45.6%	44.7%	48.3%	54.7%	57.5%
Civilian labor force	9,448	9,702	11,246	2,368	619	2,231	20	2,066	1,235	1,330	384,190	64,383,493
Employed	8,397	9,104	10,093	2,159	591	2,103	20	1,850	1,156	1,153	356,356	60,630,069
Unemployed	1,051	598	1,153	209	28	128	-	216	79	177	27,834	3,753,424
Unemployment Rate	11.1%	6.2%	10.3%	8.8%	4.5%	5.7%	0.0%	10.5%	6.4%	13.3%	7.2%	5.8%
Armed Forces	-	-	-	-	-	-	-	-	-	-	1,899	164,239
Not in labor force	11,222	10,409	12,668	2,590	482	2,955	11	2,460	1,526	1,426	319,992	47,638,063

Source: US Census Bureau, Fact Sheets, 2000 Census

Table 9: Analysis of Those Not in the Labor Force, ELIA Counties, 2000

Employment Status	Lea County		Eddy County		Chaves County		Texas Counties	
Males not in the labor force	7,369	100%	6,140	100%	7,853	100%	7,209	100%
Ages 16 to 19	1,124	15%	952	16%	1,237	16%	1,217	17%
Ages 20 to 24	409	6%	98	2%	179	2%	388	5%
Ages 65 and over	2,405	33%	2,706	44%	3,184	41%	2,591	36%
Ages 21 to 64 with a disability	1,626	22%	1,315	5%	1,437	12%	1,236	17%
Remainder for Males	1,805	24%	1,069	34%	1,816	30%	1,777	25%
Females not in the labor force	11,222	100%	10,409	100%	12,668	100%	11,450	100%
Ages 16 to 19	1,278	11%	1,027	10%	1,239	10%	1,432	13%
Ages 20 to 24	713	6%	153	1%	275	2%	325	3%
Ages 65 and over	3,613	32%	3,955	38%	4,728	37%	3,442	30%
With children under 6	743	7%	547	5%	753	6%	882	8%
Ages 21 to 64 with a disability	1,555	14%	1,588	15%	2,207	17%	1,435	13%
Remainder for Females	3,320	30%	3,139	30%	3,466	27%	3,934	34%

Source: US Census Bureau, Fact Sheets, 2000 Census

The economy of the region has changed dramatically since 2000. Table 10 presents annual averages on the civilian labor force, employment, unemployment and the unemployment rate for each of the counties included in the economic analysis from 2000 to 2006. The final column calculates the changes in each of the variables since 2000. Over this period with three exceptions, both the labor force and employment in each of the counties have increased. The exceptions are Reeves, tiny (in terms of population) Loving, and Gaines, where the declines have been relatively small. In some cases, like Lea County, the increases have been considerable. Aside from three exceptions mentioned, the gains in employment are greater than those in the labor force. Both the number and the percent of those counted as unemployed have fallen. In some counties, notably Lea, Eddy, Andrews, and Culberson, the employment rate in 2006 averaged well below 4%, a result generally said to be indicative of a tight labor market. There is no question that employers in Lea and Eddy counties and probably Andrews as well are having difficulties attracting and keeping workers. As noted above, the oil boom is on, and oil and associated industries are bidding up the price of labor and taking labor away from other industries. BBER's survey of employers in Lea County found many businesses ready and willing to hire more people. Some were having difficulty finding workers with particular skills/certifications, such as a commercial drivers license. In many cases, however, the skill and education requirements were minimal, but suitable workers, who could pass a drug test were in short supply.

Table 11 presents Census 2000 data on the top 20 occupations in Eddy and Lea counties. Even in 2000 and before the energy boom a number of the top occupations were in the construction, extraction and maintenance occupations and the production, transportation and material moving occupations. Many of these occupations have relatively low educational requirements. Thus, it perhaps is not surprising that the educational attainment in the region is well below both that for New Mexico and for the US. (See Table 12.)

Table 10. Civilian Labor Force, Employment and Unemployment, 2000-06

	2000	2001	2002	2003	2004	2005	2006	Change 2000-06
NEW MEXICO COUNTIES								
Chaves County								
Civilian Labor Force	25,826	25,853	25,805	25,946	26,176	26,630	26,982	1,156
Employment	24,378	24,399	24,132	24,031	24,376	25,034	25,711	1,333
Unemployment	1,448	1,454	1,673	1,915	1,800	1,596	1,272	-176
Rate	5.60%	5.60%	6.50%	7.40%	6.90%	6.00%	4.70%	-0.9%
Eddy County								
Civilian Labor Force	23,273	23,497	23,949	24,237	24,524	25,057	25,433	2,160
Employment	21,951	22,323	22,542	22,772	23,114	23,841	24,452	2,501
Unemployment	1,322	1,174	1,407	1,465	1,410	1,216	981	-341
Rate	5.70%	5.00%	5.90%	6.00%	5.70%	4.90%	3.90%	-1.8%
Lea County								
Civilian Labor Force	22,646	23,702	23,365	24,040	24,899	26,315	27,406	4,760
Employment	21,455	22,684	22,093	22,745	23,643	25,161	26,480	5,025
Unemployment	1,191	1,018	1,272	1,295	1,256	1,154	926	-265
Rate	5.30%	4.30%	5.40%	5.40%	5.00%	4.40%	3.40%	-1.9%
NEW MEXICO								
Civilian Labor Force	852,293	863,682	875,631	893,118	914,538	935,888	952,933	100,640
Employment	810,024	821,003	827,303	840,422	862,422	886,724	912,126	102,102
Unemployment	42,269	42,679	48,328	52,696	52,116	49,164	40,807	-1,462
Rate	5.00%	4.90%	5.50%	5.90%	5.70%	5.30%	4.30%	-0.7%
TEXAS COUNTIES								
Andrews County								
Civilian Labor Force	5,612	5,673	5,874	6,273	6,256	6,422	7,022	1,410
Employment	5,336	5,425	5,542	5,911	5,942	6,145	6,777	1,441
Unemployment	276	248	332	362	314	277	245	-31
Rate	4.92%	4.37%	5.65%	5.77%	5.02%	4.31%	3.49%	-1.4%
Culberson County								
Civilian Labor Force	1,489	1,547	1,610	1,609	1,561	1,660	1,683	194
Employment	1,404	1,471	1,510	1,514	1,471	1,586	1,629	225
Unemployment	85	76	100	95	90	74	54	-31
Rate	5.71%	4.91%	6.21%	5.90%	5.77%	4.46%	3.21%	-2.5%
Gaines County								
Civilian Labor Force	6,231	6,312	6,443	6,872	6,682	6,601	6,135	-96
Employment	5,961	6,016	6,113	6,513	6,322	6,279	5,848	-113
Unemployment	270	296	330	359	360	322	287	17
Rate	4.33%	4.69%	5.12%	5.22%	5.39%	4.88%	4.68%	0.3%
Loving County								
Civilian Labor Force	49	48	47	50	58	36	37	-12
Employment	45	45	44	45	54	32	33	-12
Unemployment	4	3	3	5	4	4	4	0
Rate	8.16%	6.25%	6.38%	10.00%	6.90%	11.11%	10.81%	2.6%
Reeves County								
Civilian Labor Force	5,033	4,989	5,063	4,787	4,442	4,329	4,149	-884
Employment	4,589	4,616	4,340	4,224	4,034	3,982	3,882	-707
Unemployment	444	373	723	563	408	347	267	-177
Rate	8.82%	7.48%	14.28%	11.76%	9.19%	8.02%	6.44%	-2.4%
Winkler County								
Civilian Labor Force	2,926	2,941	3,001	3,083	3,105	3,052	3,221	295
Employment	2,759	2,774	2,734	2,844	2,902	2,893	3,089	330
Unemployment	167	167	267	239	203	159	132	-35
Rate	5.71%	5.68%	8.90%	7.75%	6.54%	5.21%	4.10%	-1.6%
Yoakum County								
Civilian Labor Force	3,309	3,501	3,296	3,416	3,338	3,309	3,462	153
Employment	3,133	3,347	3,111	3,222	3,160	3,147	3,314	181
Unemployment	176	154	185	194	178	162	148	-28
Rate	5.32%	4.40%	5.61%	5.68%	5.33%	4.90%	4.27%	-1.0%
UNITED STATES								
Civilian Labor Force (000s) :	142,583	143,734	144,863	146,510	147,401	149,320	151,428	8,845
Employment	136,891	136,933	136,485	137,736	139,252	141,730	144,427	7,536
Unemployment	5,692	6,801	8,378	8,774	8,149	7,591	7,001	1,309
Rate	4.00%	4.70%	5.80%	6.00%	5.50%	5.10%	4.60%	0.6%

Estimates are not seasonally adjusted. Estimates are subject to revision.

Sources: New Mexico Department of Labor, Table A: Civilian Labor Force, Employment, Unemployment and Unemployment Rate, 1996-2007, pulled 3-9-07. Texas Workforce Commission, Texas Labor Market Information (http://www.tracer2.com/?PAGEID=142, as pulled 3-9-07)

Table 11. Top 20 Male and Female Occupations, Lea and Eddy Counties, 2000

LEA COUNTY

	TOP 20 MALE OCCUPATIONS	Employed Males Number	Percent
1	Installation	1,344	11.3%
2	Sales and related	1,085	9.2%
3	Extraction workers	1,072	9.0%
4	Production occupations	1,061	8.9%
5	Management except farm & farm managers	858	7.2%
6	Material moving workers	844	7.1%
7	Motor vehicle operators	812	6.8%
8	Construction trades workers	780	6.6%
9	Office & administrative support	528	4.5%
10	Supervisors, construction & extraction	455	3.8%
11	Protective service occupations:	388	3.3%
12	Building & grounds cleaning/maintenance	318	2.7%
13	Farming, fishing and forestry	317	2.7%
14	Education, training & library	284	2.4%
15	Fire fighting, prevention & law enforcement	279	2.4%
16	Farmers and farm managers	231	1.9%
17	Food preparation & serving related	191	1.6%
18	Health diagnosing & treating practitioners & technical	188	1.6%
19	Community & social services	147	1.2%
20	Architects, surveyors, cartographers & engineers	129	1.1%
		11,311	95.4%

	TOP 20 FEMALE OCCUPATIONS	Employed Females Number	Percent
1	Office & administrative support	1,997	23.8%
2	Sales and related	1,060	12.6%
3	Education, training & library	998	11.9%
4	Food preparation & serving related	842	10.0%
5	Personal care & service	589	7.0%
6	Management except farm & farm managers	482	5.7%
7	Health diagnosing & treating practitioners & technical	410	4.9%
8	Healthcare support occupations	349	4.2%
9	ilding and grounds cleaning and maintenance occupatic	329	3.9%
10	Health technologists and technicians	179	2.1%
11	Community and social services occupations	155	1.8%
12	Financial specialists	128	1.5%
13	Arts, design, entertainment, sports & media	117	1.4%
14	Fire fighting, prevention & law enforcement	106	1.3%
15	Legal occupations	58	0.7%
16	Business operations specialists	49	0.6%
17	Computer and mathematical occupations	44	0.5%
18	Extraction workers	28	0.3%
19	Farmers and farm managers	20	0.2%
20	Construction trades workers	20	0.2%
		7,960	94.8%

EDDY COUNTY

	TOP 20 MALE OCCUPATIONS	Employed Males Number	Percent
	Construction trades workers	1,182	10.3%
	Installation	1,155	10.1%
	Sales & related	1,039	9.0%
	Management except farm & farm managers	871	7.6%
	Production occupations	865	7.5%
	Material moving workers	768	6.7%
	Motor vehicle operators	700	6.1%
	Extraction workers	615	5.4%
	Office and administrative support	544	4.7%
	Building & grounds cleaning/maintenance	509	4.4%
	Food preparation & serving related	375	3.3%
	Supervisors, construction & extraction	320	2.8%
	Protective service occupations:	311	2.7%
	Education, training & library	296	2.6%
	Fire fighting, prevention & law enforcement	244	2.1%
	Community & social services	158	1.4%
	Architects, surveyors, cartographers & engineers	155	1.3%
	Life, physical & social science	146	1.3%
	Farmers and farm managers	141	1.2%
	Health diagnosing & treating practitioners & techl	132	1.1%
		10,526	92%

	TOP 20 FEMALE OCCUPATIONS	Employed Females Number	Percent
	Office & administrative support	2,283	25.1%
	Sales & related	1,259	13.8%
	Education, training & library	948	10.4%
	Food preparation & serving related	687	7.5%
	Personal care & service	666	7.3%
	Healthcare support occupations	490	5.4%
	Management except farm & farm managers	450	4.9%
	Health diagnosing & treating practitioners & technica	392	4.3%
	Building & grounds cleaning/maintenance	283	3.1%
	Production occupations	235	2.6%
	Health technologists and technicians	208	2.3%
	Financial specialists	198	2.2%
	Motor vehicle operators	171	1.9%
	Community & social services	136	1.5%
	Arts, design, entertainment, sports & media	107	1.2%
	Business operations specialists	106	1.2%
	Life, physical & social science	82	0.9%
	Material moving workers	64	0.7%
	Computer and mathematical occupations	53	0.6%
	Construction trades workers	53	0.6%
		8,871	97.4%

US Census Bureau, 2000 Census, Table P50 With Codes (PDF 8KB)
Detailed Occupation Code List (PDF 42KB)

Table 12. Educational Attainment in the ELIA Counties, 2000

Percent of Population 25 and Older with	Lea	Eddy	Chaves	Texas Counties	New Mexico	US
Less than 9th grade	14.9	10.8	14.1	21.4	9.3	7.5
9th to 12th grade, no diploma	18.0	14.2	13.3	17.1	11.9	12.1
High school graduate (includes equivalei	27.9	34.3	26.4	28.3	26.6	28.6
Some college, no degree	21.7	21.9	23.8	18.2	22.9	21.0
Associate degree	5.8	5.2	6.1	3.6	5.9	6.3
Bachelor's degree	7.5	8.7	9.8	8.0	13.6	15.5
Graduate or professional degree	4.2	4.8	6.4	3.4	9.8	8.9

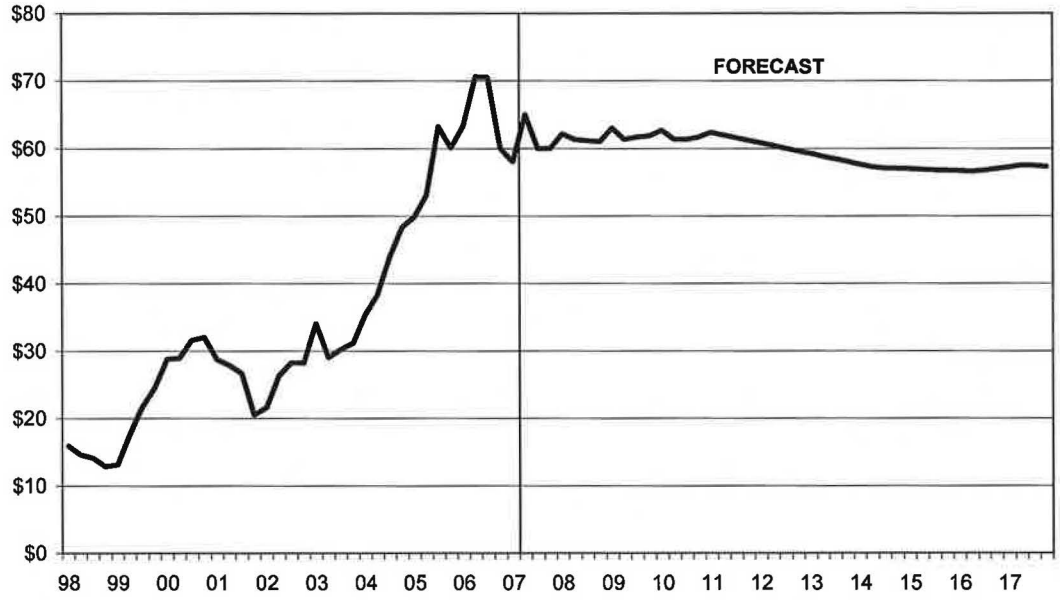
Source: US Census Bureau, Fact Sheets, 2000 Census

ECONOMIC OUTLOOK FOR THE REGION

With its historical dependence on natural resources and mining, the economic region surrounding the ELEA site has experienced periodic boom and bust but little in the way of sustained economic development. Energy markets have once again created a frenzy of activity in the oil fields, just as the region was set to embark on a new energy future. Now the two visions seem to collide in an area where even relatively unskilled labor is in short supply and in-migrants are dissuaded by an unresponsive housing market.

In discussing the economic outlook for this region, it is first necessary to talk about the outlook for oil and gas. This region has seen oil booms before and also the busts which followed. Are there reasons for believing that this boom may be different and that the jobs created may be more permanent? The forecasts for future energy prices suggest that a $30 per barrel price of oil (the average price in 2000 was $30.35) is history and high energy prices, with oil above $55, are here to stay. (See Figure 10 below which reports the oil price forecast of Global Insight.) While such a price would probably be sufficient to encourage oil exploration and drilling and oil

Figure 10: Actual and Forecasted Per Barrel Spot Price for West Texas Intermediate



Global Insight, US Economic Outlook, April 2007

well enhancement activities today, will it be sufficient in the future and as the richest deposits are depleted?[5] This is a question that relates to reserves, to the costs of

[5] In an interview, Harry Teague informed me that a price of $35-40 would be needed today, given the higher wages paid to workers in the oil fields and the difficulties finding and keeping workers.

exploration, drilling and enhancement activities, and also to the costs of production as reserves are drawn down, but it also relates to opportunities elsewhere.[6] How do Lea and Eddy Counties compare to other areas in the Permian Basin?[7] How does the Permian Basin compare to other oil fields?

There would seem to be a reasonable basis for optimism that the levels of oil and gas activity seen today will be sustained for at least the next few years. Indeed, some major providers of mining support and field services indicated they planned to continue adding to their workforce over the next few years. And Enterprise Project Partners is investing $150 million in a 75 MBPD Hobbs Fractionator that is located between Hobbs and Seminole, TX. The Hobbs Frac is part of an overall effort to increase capacity to store and transport liquified natural gas (NGL) within the region. The project should be completed by the end of the second quarter of 2007.[8]

Many local residents and businesses have a long and bitter experience with the energy rollercoaster and are unlikely to be impressed with graphs purporting to indicate future stability. This perspective undoubtedly explains part of the reluctance of the local construction industry to commit to major housing developments. It also may explain the limited areas currently served by water and sewer infrastructure in communities like Hobbs. The section of this report dealing with local government revenue sources provides abundant evidence of the oil and gas windfall to local county governments and to many communities and school districts. Rapid growth poses challenges to local governments. What the energy boom can provide are the financial resources to make strategic investments in infrastructure – in transportation networks, in water and sewer systems, in public schools, in parks and in cultural and recreational facilities. Hobbs has been making investments in its downtown, with a street beautification project and the acquisition and remodeling of a building that will serve as the future city hall, and the City has made other investments in amenities (e.g., a new museum, a trail for walkers and runners).

As is indicated in the housing section of this report, there are numerous projects in the works in both Eddy and Lea County that promise to address the housing needs of the future workforce. The housing needs may also be met by communities in Texas. Seminole, across the border from Hobbs in Gaines County has an established an growing Mennonite community that includes many builders and skilled craftspeople. These workers, who have been commuting into Odessa and other cities for construction jobs, have recently organized a coop that will focus on building

---

[6] BBER staff were unable to find anything close to reliable estimates of reserves. One manager of a company which provides oil field services told us that technological innovations have dramatically increased the yield from fields once thought depleted. On the other hand, the *Wall Street Journal* (April 5, 2007) recently reported the stunned reaction of the oil industry to a rapid fall-off in production from the huge Cantarell Oil Field off the coast of Mexico.

[7] BBER staff have been told that Lea County sits on some of the richest deposits in the Permian Basin. However, we have yet to find anyone who has quantified the advantage over time.

[8] Enterprise Products Partners L.P. Powerpoint for RBC Dain Rausher Luncheon Meeting, May 18, 2006. http://library.corporate-ir.net/library/80/805/80547/items/198857/epd_DainRauscher05_18_06.pdf

homes in the Seminole area. The economic development team in Andrews County just to the south is working with a number of developers on major housing projects to meet future workforce needs. The commute to Hobbs and Eunice from these areas is less than one hour.

Assuming the infrastructure and housing needs can be addressed, the economy of the ELEA region seems poised for growth from sources outside of oil and gas. There are several projects already in the pipeline that merit discussion. The biggest project is the National Enrichment Facility (NEF). being constructed by URENCO in Eunice.

National Enrichment Facility (NEF)
Eunice, New Mexico

According to their website, the new National Enrichment Facility (NEF) will use a gas centrifuge developed by Urenco (the parent of Louisiana Energy Systems, or LES, which brought the project to New Mexico) to produce the "low enriched uranium" required by nuclear power plants. "Full capacity operation of the NEF is expected to annually produce 3 million separative work units (SWU) of uranium, which is approximately one-fourth...of the enriched uranium used in U.S. nuclear power plants."[9]

The economic impact sheet posted on the NEF website estimates construction of the $1.5 billion facility will take seven and a half years, "benefiting local construction, service and building supply industries."[10] LES already has a number of people on the payroll in Eunice and more will be arriving. The construction project is being managed by the Westinghouse Group International (WGI), with local construction under Russ Contractors, a division of WGI. Some 1,000 construction workers will be building the plant, with most of the work occurring during the 18 month period beginning July 2007. Once the plant itself is built, this construction workforce will shrink but work will continue through 2013. URENCO's unit Enrichment Technology will build all the centrifuges. They currently have over 30 people working in the area. The plant itself will begin operations in 2009, although full capacity will not be achieved until 2013. According to the website, "Total payroll during construction is estimated to be $170 million....Annual facility operations will provide close to 300 full-time and contract jobs who will receive an estimated annual pay of $10 million and an estimated $3.1 million in annual benefits." NEF employment opportunities will range from operations, maintenance and health physics positions to clerical and security-related jobs. Many positions will require training, which LES will provide through class-room programs and on-the-job.

---

[9] About the National Enrichment Facility, http://www.nefnm.com/v2b/about.asp
[10] http://www.nefnm.com/v2b/about_impact.asp. The discussion here is also based on an interview with the public information officer.

LES has been working to line up housing for construction workers using a multi-prong approach that includes man camps, RV sites, mobile homes, and hotel rooms.

550-Megawatt Combined-Cycle Generating Plant
West of Hobbs, New Mexico

Lea Power Partners is developing the project under a contract with Xcel Energy, which will purchase power from the plant for 25 years. Colorado Energy Management will construct and operate the plant.
The project will supplement existing capacity and serve a market which has been growing at a rate of 8% per year.[11] According to the press release, the plant will consist of

> two combustion turbine generators, two heat recovery steam boilers and one steam turbine generator. Exhaust gases from the combustion turbines convert water into superheated steam in the boilers, which then power the steam turbine generator....because the plant features a dry condensing system, it will use approximately 10 percent of the water required by a traditional power generating station...the plant is more efficient at converting natural gas to electric power with fewer emissions...And the additional power means that older, les efficient plants can scale back...and thus reduce their emissions.[10]

According to Dan Dunlap from Colorado Energy Management, construction on the plant will begin June 1, 2006, with an expected completion date a year later.[12] At any time, the project will involve as many as 500-550 construction workers, including both direct hires and contract workers. Operations will employ 30-35 people.

Southwest Energy and Feed LLC
Gaines County

There are currently plans to build a $4 million facility to produce bio fuel and cattle feed about 15 miles east of Seminole, Texas.[13] The project is currently in the process of finishing the permit process and acquiring the needed machinery for construction. Ground breaking is expected to start by the end of April and is expected to take up to 10 months. Operations should start in March of 2008. The operating of the facility is expected to employ 7 people and to operate 6 days a week, 24 hours a day.

The company will produce two products (bio fuel and cattle feed) from discarded cottonseeds. The market for these products is considered local. Consumers for quality cattle feed are numerous so this product should require little logistical investment. On the other hand, the ability for vehicles to use a bio fuel varies from company to com-

---

[11] Xcel Energy, "New power plant to boost area capacity with minimal environmental impact." Press Release, October 26, 2006.
[12] Phone conversation, April 3, 2007.
[13] Based on Conversation with Mr. Wayne Mixon, President of Southwest Energy and Feed LLC on Thursday April 12, 2007.

pany and model to model. Southwest will be producing bio fuel for the local market (60-80 mile radius). Expected output will be between 1.7 and 2.0 million g/y (not considered a large amount). The facility is expected to process approximately 50,000 tons of cottonseed/year.

Southwest is planning on evaluating the profitability of the business after 3 years of operation. If the business does well the company is expected to expand by up to double initial capacity.

Waste Isolation Power Plant (WIPP)
Carlsbad, New Mexico

WIPP is administered by the U.S. Department of Energy's Carlsbad Area Office. The facility is managed and operated for the DOE by the Washington Group International and currently employees 700, including contract workers.[14] According to the Washington Group's website, WIPP is the only geological repository in the US for permanent storage of defense-related transuranic waste.[15] The facility has recently received the necessary permits to receive and dispose of remote-handled (RH) transuranic (TRU) radioactive waste currently stored at DOE clean-up sites across the country.[16] While no expansion is planned, the RH-TRU waste requires specialized equipment and handling. The permits could open the way for a new mission for WIPP and possibly for a WIPP 2.

Engineered Products Department (EPD)
Carlsbad, New Mexico

EPD is a division within Washington Group International. According to their website,

> EPD is a precision metals fabrication and machining facility specializing in high integrity containers for nuclear and hazardous service. [e.g., Tru-Pac 2 used for transporting transuranic waste to WIPP] [EPD] also provide[s] unique testing capabilities and manufacture pressure vessels, gloveboxes, and other specialized hardware for a variety of industrial applications.

---

[14] Conversation with Phil Mottel.
[15] Washington Group International website discusses the WIPP site as an example of their nuclear waste management and disposal facilities. **http://www.wgint.com/about_us.html**
[16] For a discussion of how Remote-Handled Waste differs from the waste previously deposited at the WIPP, see National Research Council, Committee on the Characterization of Remote-HandledTransuranic Waste for the Waste Isolation Pilot Plant,Characterization of Remote-Handled Transuranic *Waste for the Waste Isolation Pilot Plant: Final, Executive Summary* (http://www.nap.edu/catalog/10492.html)

> ...Engineered Products Department (EPD) operates one of the most comprehensively equipped facilities for precision metals fabrication and machining in the Southwest. Located in Carlsbad, New Mexico, EPD maintains more than 100,000 square feet of shop space with an additional 18 acres of property for product testing, metal finishing, material staging, and storage. The Research, Development, and Manufacturing facility includes a 24,000 square foot building used for machining and fabrication plus a 30,000 square foot building used for pre-processing (cutting, forming, shearing, rolling), fabrication, assembly, and inspection operations.

According to Phil Mottel of DOE, EPD, which currently employs 150 or so employees, including part time workers, last year invested $1.5 million in their state of the art facility and plan to invest another $2.5 million this year. With this investment, they could double production and go to a second shift. However, EPD is currently constrained by the lack of welders in the area and is working with NMSU-Carlsbad to set up a welding program.

In addition to the major projects discussed above there are many efforts to diversify the local economy. These include the new racetrack-casino in Hobbs, which brings money into the region from Texas, capital investment in the Permian Basin Short Line Railroad from Monahan Texas to Lovington, that opens up new possibilities in terms of distribution centers; a medical transcription service in Carlsbad that is trying to grow.

With both the NEF and the power plant under construction beginning in June and July of this year, Lea County employment growth is expected to exceed recent experience and to be in the 5 to 10% range in both 2007 and 2008, slowing dramatically, perhaps even turning negative in 2009 when both projects will have been completed. The Lea County economy is expected to experience moderate employment growth thereafter. Oil and gas activity may continue to have employment gains if energy prices remain high or exceed current levels, but the growth in employment is expected to moderate substantially. This sector could contract if nominal prices stay flat or decline and the oil price, after adjusting for inflation, provides insufficient incentive for additional exploration and drilling and oil well enhancement activities.

Like Lea County, Eddy County's future will be shaped in part by what happens to oil and gas and, to a lesser extent, to potash. However, the WIPP site and those various entities which have grown up around WIPP or which are in Carlsbad in support of the WIPP operation will play a major role in the economy. It is encouraging that some of these entities are growing and developing new markets. Carlsbad Caverns and other outdoor recreational opportunities will continue to draw tourists into the area.

Chaves County has considerably less mining activity but has, nonetheless felt the effects of the energy boom. The county has a diversified economy, which has recently benefited from the expansion of the dairy industry and of processing activities,

like cheese-making. The manufacturing base in Roswell was hit hard by the closure of Nova Bus. The current shut-down of the successor plant run by Millenium raises concerns for the future. Roswell does have a growing industry that uses facilities at the old air base to service/renovate airplanes. Growth is expected to be moderate.

Many of the Texas counties in the economic region are tied into the oil economy and will rise or fall depending upon future energy prices. Gaines County has some interesting economic initiatives, including the builders coop and bio-diesel plant discussed above. Andrews is the potential site for two major projects discussed below. Both areas have seen some in-migration by employees from the NEF facility, although, to date, the number is very small. The housing markets in both counties seem to be responding, albeit slowly, to the need for more housing, and the prices quoted for new houses seem to compare favorably with the Hobbs market. This suggests that counties in Texas are likely to experience population increase related to developments in the larger region. The growth of their economies and their population will undoubtedly encourage more retail and commercial development. There is already a Super Wal-Mart being built in Seminole.

ENERGY CORRIDOR

Many in the larger region that spans from Midland-Odessa up to Andrews and Gaines Counties north to perhaps as far as Portales and south and west to encompass Lea and Eddy Counties in New Mexico have a vision of this area as the new energy corridor. The vision sees as assets the major facilities already in place or under construction – e.g., WIPP, NEF -- and to the infrastructure and organizations that have grown up to support these facilities, e.g., EPD, as already discussed, the Center of Excellence for Hazardous Materials Management (CEHMM), the Carlsbad Environmental Monitoring & Research Center at NMSU in Carlsbad, and Waste Control Specialists.[17]

The vision broadens to encompass the synergies of new facilities which might be located in the area:

FutureGen
Odessa, Tx

According to their website,

[17] Description of vendor Waste Control Specialists was provided by the company. WCS operates a state of the art facility in Andrews County, Texas that has received permits for the treatment, storage, and disposal of radioactive, hazardous and toxic waste. WCS has formed joint waste management, research and testing partnerships with a variety of major waste management and research organizations in order to provide a full suite of safe, economical, and innovative services. See http://www.bechteljacobs.com/bs_vendorwcs.shtml

> FutureGen is a public-private partnership to design, build, and operate the world's first coal-fueled, near-zero emissions power plant, at a cost exceeding US$1 billion. The commercial-scale plant will prove the technical and economic feasibility of producing low-cost electricity and hydrogen from coal while nearly eliminating emissions. It will also support testing and commercialization of technologies focused on generating clean power, capturing and permanently storing carbon dioxide, and producing hydrogen... [18]

The FutureGen Alliance, which includes some of the largest producers and users of coal working in collaboration with the US Department of Energy, will build the FutureGen plant on a site selected through an open, competitive site-selection process. A Request for Proposals to host the site (Site RFP) was issued in March 2006, and a total of 12 proposals were received. Four sites were selected for further review. One of those sites is Odessa. According to the website,

> The proposed power plant site is a 600-acre tract of land located 15 miles west of Odessa in Ector County, Texas. The site has access to two nearby 138-kV transmission lines. Sufficient groundwater is available within comparatively short distances from the proposed power plant site for use as a water supply source for the facility. The site is accessible by rail. A natural gas pipeline traverses the proposed power plant site, which has the capability to deliver the necessary volume to the plant. The plant site is approximately 58 miles from the proposed sequestration reservoir, which is located within Pecos County, Texas. The proposed power plant site can be interconnected to the proposed sequestration reservoir by a network of existing CO2 pipelines used for secondary oil recovery in the region. It covers a total land area of approximately 42,320 acres and is minimally developed both for surface or subsurface uses. The land is in a remote, rural area dominated historically by ranching and oil and gas activities and associated industrial structures are still present.

If built in Odessa, the project is expected to cost $250 million and to have peak construction employment of 1,300. Once operational, the facility should have a permanent workforce of 150.

High Temperature Teaching and Test Reactor Facility (HT3R)
University of Texas - Permian Basin
Andrews County

According to a fact sheet prepared on the facility, "The total cost, including engineering, licensing, and construction in West Texas, is estimated to be approximately

[18] http://www.futuregenalliance.org/about/timeline.stm. All information contained in this section is from this site. BBER did speak at length with Stephanie Sparkman about the facility and the prospects for being selected.

$400 million - to be raised from government, industry, and private sources.[19] The facility will be sited in Andrews County

The basic components of the project are the following :

Reactor – 25 MWth (Mega Watt thermal) high temperature (eventually greater than 950o Celsius), helium cooled, passively safe reactor that uses TRISOcoated fuel particles in a graphite prismatic core.

Radiation Laboratory – Will contain regular and remote radiation handling facilities and state-of-the-art nuclear spectroscopic equipment.

High-Temperature Process & Materials Laboratory – Will initially use the reactor waste heat at temperatures up to 950o C to test and develop new industrial processes and materials. The processes of interest include hydrogen and synfuels production while the materials will include the development of new alloys and ceramics that can be easily machined and tooled.

Brayton Cycle Development Laboratory – Will test and develop high-efficiency electricity generation methods and equipment that utilize high-temperature gas turbines like those in jet aircraft.[20]

The goals are to educate and train a new generation of scientists and engineers and develop new materials that can successfully operate in and new industrial methods and processes requiring large quantities of heat in excess of 950 degrees Celsius.

Deconversion Facility
Andrews County, Texas

Early in 2005, Louisiana Energy Services (LES) and the nuclear energy services company AREVA signed a Memorandum of Understanding that could lead to the construction of a private uranium hexafluoride deconversion plant to support the proposed National Enrichment Facility (NEF) outside Eunice, New Mexico. NEF has been under considerable pressure from the state of New Mexico to limit its on-site storage of nuclear by-products and to deconvert the NEF byproduct to uranium oxide that can be disposed of safely in low-level radioactive waste facility outside New Mexico. While there are deconversion facilities elsewhere that can handle this waste the deconversion facility complements other proposed facilities for the area.

GNEP
Eddy Lee Energy Alliance site between Hobbs and Carlsbad

---

[19] Jim Wright, HTTTR Project Manager, *High-Temperature Teaching and Test Reactor Research Facility: FACT SHEET*

[20] Ibid.

TABLE 1. ELEA REGION HISTORICAL EMPLOYMENT BY INDUSTRY
Continued

	Employment				Annual % Growth by Decade		
	1970	1980	1990	2000	1970-80	1980-90	1990-00
Texas Counties Total Employment	25,637	29,083	29,290	28,534	1.3%	0.1%	-0.3%
Farm employment	3,384	2,384	1,839	2,329	-3.4%	-2.6%	2.4%
Agric serv, forestry, fishing & other	406	1,057	1,307	1,191	10.0%	2.1%	-0.9%
Mining & Extractive Industry	4,630	5,595	5,254	3,119	1.9%	-0.6%	-5.1%
Construction	1,334	1,504	1,210	1,280	1.2%	-2.2%	0.6%
Manufacturing	959	1,106	945	1,652	1.4%	-1.6%	5.7%
Transportation & public utilities	1,311	1,708	1,570	1,491	2.7%	-0.8%	-0.5%
Wholesale trade	833	1,008	976	812	1.9%	-0.3%	-1.8%
Retail trade	3,620	3,714	4,073	3,879	0.3%	0.9%	-0.5%
Finance, insurance, & real estate	764	1,102	1,208	766	3.7%	0.9%	-4.5%
Services	3,608	4,128	4,697	4,190	1.4%	1.3%	-1.1%
Government	3,568	4,252	4,955	5,658	1.8%	1.5%	1.3%
Federal, civilian	174	210	234	244	1.9%	1.1%	0.4%
Military	277	191	235	140	-3.6%	2.1%	-5.0%
State and local	3,084	3,837	4,473	5,247	2.2%	1.5%	1.6%
New Mexico Total Employment	398,899	598,199	767,139	972,954	4.1%	2.5%	2.4%
Farm employment	12,716	13,400	13,600	14,985	0.5%	0.1%	1.0%
Agric serv, forestry, fishing & other	2,682	4,358	8,414	13,548	5.0%	6.8%	4.9%
Mining & Extractive Industry	18,956	31,152	20,489	19,323	5.1%	-4.1%	-0.6%
Construction	20,097	38,873	40,606	59,895	6.8%	0.4%	4.0%
Manufacturing	21,942	35,963	47,732	48,788	5.1%	2.9%	0.2%
Transportation & public utilities	21,625	30,732	34,130	43,350	3.6%	1.1%	2.4%
Wholesale trade	12,414	22,733	27,896	33,751	6.2%	2.1%	1.9%
Retail trade	64,785	98,075	134,482	172,516	4.2%	3.2%	2.5%
Finance, insurance, & real estate	23,766	37,945	46,955	62,905	4.8%	2.2%	3.0%
Services	79,455	128,325	207,381	294,728	4.9%	4.9%	3.6%
Government	113,055	147,852	179,288	202,390	2.7%	1.9%	1.2%
Federal, civilian	27,512	29,963	31,621	30,205	0.9%	0.5%	-0.5%
Military	22,723	21,794	22,552	17,167	-0.4%	0.3%	-2.7%
State and local	62,820	96,095	125,115	155,018	4.3%	2.7%	2.2%
United State Total Employment	91,282	114,231	139,381	166,759	2.3%	2.0%	1.8%
Farm employment	3,961	3,798	3,153	3,113	-0.4%	-1.8%	-0.1%
Agric serv, forestry, fishing & other	525	909	1,454	2,121	5.6%	4.8%	3.8%
Mining & Extractive Industry	744	1,278	1,044	784	5.6%	-2.0%	-2.8%
Construction	4,399	5,654	7,262	9,446	2.5%	2.5%	2.7%
Manufacturing	19,687	20,781	19,694	19,115	0.5%	-0.5%	-0.3%
Transportation & public utilities	4,866	5,672	6,551	8,244	1.5%	1.5%	2.3%
Wholesale trade	4,173	5,742	6,721	7,584	3.2%	1.6%	1.2%
Retail trade	13,699	17,884	22,886	27,222	2.7%	2.5%	1.8%
Finance, insurance, & real estate	6,125	8,756	10,715	13,194	3.6%	2.0%	2.1%
Services	17,022	24,983	38,671	52,991	3.9%	4.5%	3.2%
Government	16,081	18,775	21,232	22,944	1.6%	1.2%	0.8%
Federal, civilian	2,902	2,994	3,233	2,892	0.3%	0.8%	-1.1%
Military	3,232	2,501	2,718	2,075	-2.5%	0.8%	-2.7%
State and local	9,947	13,280	15,281	17,977	2.9%	1.4%	1.6%

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

(L) Less than 10 jobs, but the estimates for this item are included in the totals.

(N) Data not available for this year.

Source: US Bureau of Economic Analysis

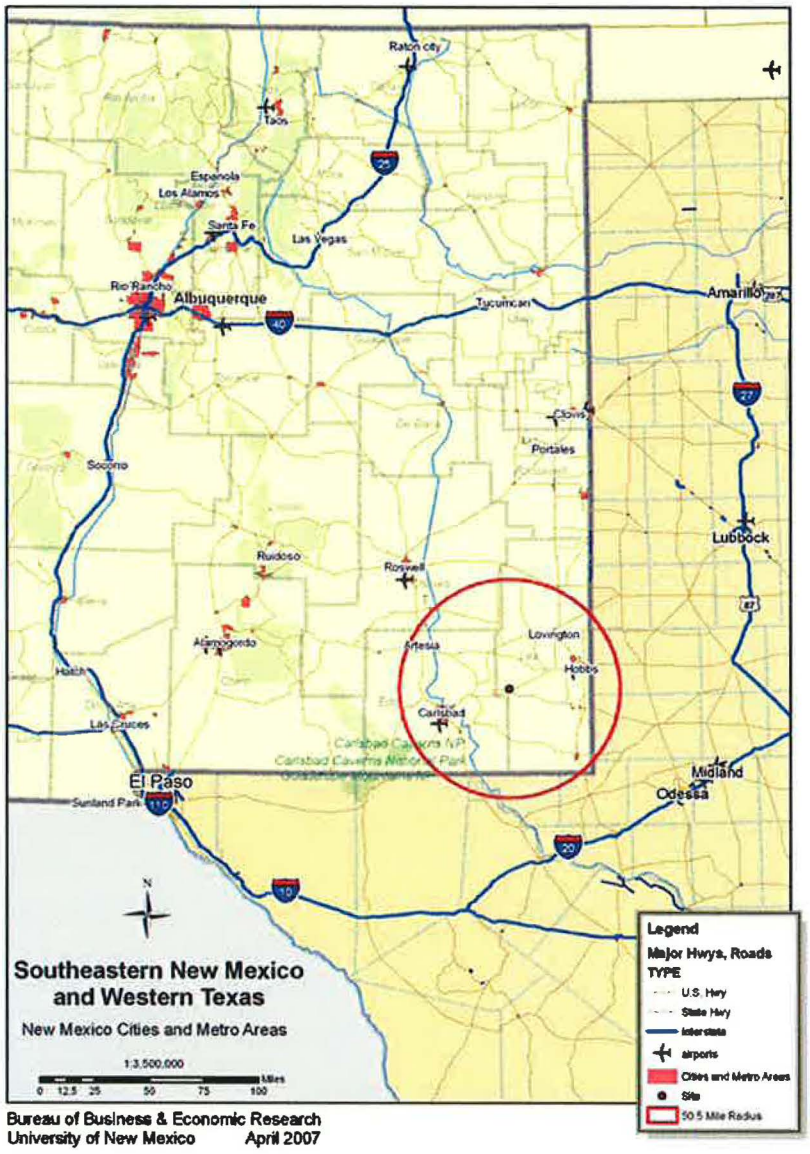
Part 2B

METROPOLITAN STATISTICAL AREAS IN THE GREATER REGION SURROUNDING THE ELEA PROPOSED SITE FOR GNEP

METROPOLITAN STATISTICAL AREAS IN THE GREATER REGION SURROUNDING THE ELEA PROPOSED SITE FOR GNEP

Figure 1 shows the major metropolitan areas within the larger region of the ELEA proposed GNEP site. Going clockwise from upper left, the MSAs are Albuquerque, Santa Fe, Amarillo, Lubbock, Odessa, Midland, El Paso and Las Cruces. The closest metro areas and the ones with which there has been the closest ties for Lea and Eddy Counties are Lubbock, Midland-Odessa and probably El Paso.

Figure 1. Major Metropolitan Areas within the Region



Bureau of Business & Economic Research
University of New Mexico April 2007

Table 1 provides a socio-economic profile on the MSA's within the larger region.

MSA	Census Population Est 2006	Total Non-farm Employment 2006	Personal Income $ millions 2005	Per Capita Income 2005
Albuquerque	816,811	391,700	24,319	30,477
Santa Fe	142,407	62,800	5,066	35,964
Las Cruces	193,888	67,000	4,302	22,706
Amarillo	241,515	110,100	6,712	28,122
El Paso	736,310	264,800	16,434	22,775
Lubbock	261,411	128,400	7,346	28,364
Midland	124,380	63,000	4,847	39,939
Odessa	127,462	57,400	3,234	25,805

Sources: US Census Bureau, NM Department of Labor, Texas Labor Market Information (http://www.tracer2.com/), US Bureau of Economic Analysis (http://www.bea.gov/)

Part 3

Public Services

EDDY AND LEA COUNTY
POLICE, FIRE, AND OTHER PUBLIC SAFETY SERVICES

CROSS-COUNTY SERVICES

Harkness Ambulance Service. 5 Full time EMTS, 7 Part time EMTS, 5 ambulances which cover Chavez, Eddy and Lea Counties.

Southwest Med Evac. The helicopter and fixed wing crews consist of a licensed, experienced pilot, flight nurse and flight paramedic. A helicopter is based in Hobbs, NM, while a fixed wing airplane is based in Carlsbad, NM.

New Mexico State Police. District 3 covers Chavez, Eddy and Lea Counties.

EDDY COUNTY SHERIFF AND FIRE

Sheriff Department

Officers:	45
Support Staff:	11
Budget:	$3,093,000/yr
Future Plans:	Wish to grow but currently no plans

County Fire Department

Firefighters:	250 volunteers among 12 different depts. Only 2 are considered paramedics.
Staff:	2 management
Stations:	19
Budget:	$5,000,000
Future Plans:	Moving all dispatch to a centralized location within Artesia that will be used by the county and state services. Will being part of an extensive communications upgrade. The county has invested approximately $10,000,000 in new vehicles over the last 10 years. This has increased the county's vehicle fleet to 65 pieces of various types from 19 different fire stations. They estimate that the county has 6200 gallons of water on wheels at all times.

ARTESIA POLICE AND FIRE

Police Department

Officers:	33
Support Staff:	36
Budget:	$5,200,000
Future Plans:	Planning on a $1.5 million increase next year.

In the planning stages for a $20 million dollar law Enforcement Complex which will house city, state and county departments plus fire and correctional staff and offices. The city is projecting that the police dept will double in size within the next 10 years.

Fire Department

Firefighters:	21 with only basic and intermediate EMT training. No paramedics. Volunteers: All staff, no volunteers
Budget:	$1,500,000
Future Plans:	Will be moving the dispatch and offices to a new centralized location.

CARLSBAD POLICE AND FIRE

Police Department

Officers:	Max 56 (currently has 50)
Support Staff:	20
Budget:	$6,000,000
Future Plans:	None, just moved into a new building

Fire Department

Firefighters:	Max 47 (currently has 45)
EMT:	All are trained EMTs, with 7 paramedics and another 6 in Training to become paramedics. About half are trained in HAZMAT situations.
Volunteers:	None. All staff positions
Budget:	$4,487,000/year
Future Plans:	No expansion plans

LOVING

Police Department

Officers:	4 Full Time and up to 10 volunteer positions; 6 currently filled.
Support Staff:	None
Budget:	Just under $200,000/year.
Future Plans:	2 FT officers are leaving for training soon and will be gone for about 6 months. The dept is going to coordinate with the new Centralized Command Center in Artesia run by the Sheriff's Department and the State Police. Updating equipment.

Fire Department

Firefighters:	27 firefighters (all volunteer).
Paramedics:	7 of the firefighters are trained as paramedics
Budget:	$46,000/year
Future Plans:	Building a second station in about 18 months.

LEA COUNTY SHERIFF AND FIRE

Sheriff Department

Officers:	39
Support Staff:	14
Budget:	$7,000,000/year
Future Plans:	New Building and equipment. A new centralized command center between Hobbs and Lovington is to be built in the next 5 years. Requesting oney from the county to increase the size of the department. Outcome unknown.

County Fire Department

Firefighters:	57 with 8 being paramedics (split among 3 different areas)
Volunteer:	all
Budget:	$106,000
Future Plans:	Not much in the way of expansion.

EUNICE POLICE AND FIRE

Police Department

Officers:	
Support Staff:	
Budget:	
Future Plans:	

Fire Department

Firefighters:	
Volunteer:	
Budget:	
Future Plans:	

HOBBS POLICE AND FIRE

Police Department

Officers:	75 (could have 85)
Support Staff:	50
Budget:	$10,000,000/year
Future Plans:	Updating equipment. Would like to increase the

amount of officers the city has to 95 positions in the next 3-5 years.

Fire Department

Firefighters:	67 (could have about 70)
EMT:	32
Volunteer:	none
Budget:	$9,000,000/year
Future Plans:	Increasing the dept to have a total of 75 positions. Building a new substation in the next 2 years. No private providers of EMS

LOVINGTON POLICE AND FIRE

Police Department

Officers:	21
Support Staff:	7
Budget:	Unknown
Future Plans:	Unknown

Fire Department

Firefighters:	25 FT (20 also EMS) and 3 PT
Volunteer:	none
Budget:	$2,000,000
Future Plans:	Replacement of some of the trucks. Adding plans for a new substation with 6-8 new positions in the next 2-3 years.

CORRECTIONS FACILITIES

Eddy County Detention Center, Carlsbad, NM

Inmates:	Max Capacity 185 currently running at about 200
Type:	Minimum/ Medium/ Maximum Security
Officers:	60
Staff:	4
Future Plans:	Turning classroom and training room into more cells. Adding more showers. Will only increase capacity by 18.

Lea County Detention Center, Lovington, NM

Inmates:	Max Capacity 400 currently running at about 300
Type:	Minimum/ Medium/ Maximum Security
Officers:	45-50

Staff:	25
Future Plans:	Unknown

LCCF Lea County Correctional Facility, 4 miles from of Hobbs, NM

Inmates:	Max Capacity 1,234, currently running at about 1192
Type:	Medium Security, Privately run facility

WATER AND SEWER SYSTEMS IN LEA AND EDDY COUNY

LEA COUNTY WATER INFRASTRUCTURE

The source of Lea County's water is the Ogallala Aquifer. This aquifer extends into Texas, Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, and Wyoming. Texas is the closest user of the aquifer, and the aquifer there is generally deeper than in either Lea or Eddy County.

The area is upgrading its water infrastructure for better reserves and more wells. The upgrades are not expected to increase capacity. The addition of new wells will allow the existing system of wells to "rest" and not be depleted nor suffer degradation in water quality. Other projects will add reservoir capacity.

Communities in Lea County are already in the process of expanding the water system and upgrading water lines for expected growth. Although there are major developable parcels served by existing water and sewer infrastructure, water service areas would need would need to be extended to accommodate substantial new housing development beyond these parcels.

HOBBS

Hobbs services about 11,500 homes and businesses from 32 wells that pump water from the Ogallala Aquifer.[21] Service in Hobbs extends to the city limits and to some surrounding areas, basically small pockets of land that make up a very small percent of total system service. There has been some housing development outside the City limits. Typically these are custom homes on large lots with their own wells. Permit data suggests that the numbers are fairly small.

Capacity: The maximum capacity for the city's water system is about 23 mg/d. The average is about 12 mg/d. The summer months will see higher usage, which amounts to about 17 mg/d, or about 75% of capacity. Usage during the winter months drops to about 6 mg/d, or 26% of capacity.

Future Projects: The City of Hobbs is currently in the process of increasing its distribution to new areas of growth. They are also replacing a storage tank with a capacity of 200,000 gallons with one that has a capacity of 600,000, for a net gain of 400,000 gallons. The city spends about $600,000 on maintenance to both the water and sewer systems.

Any large increase of demand would both affect source capacity and necessitate an expansion to the current pumping and storage system. Such expansions to the system are likely to be expensive.

---

[21] Conversation with Mr. Tim Woomer who is the Director of Utilities for the City of Hobbs, New Mexico on Tuesday, March 13, 2007.

LOVINGTON

Lovington services about 3,700 homes and businesses from 15 well into the Ogallala Aquifer that are located about 5 miles from the city.[22] Service is mainly within the city limits of Lovington, although there are small pockets of service outside. There are some large parcels of developable land within the current water service area.

Capacity: The maximum capacity for the city's water system is about 6 mg/d. The average usage is about 3 mg/d, or about 50% of capacity. The summer months will see high usage to about 5 mg/d, or about 84% of capacity.

Future Projects: The City of Lovington is currently in the process of spending $1.5 million to renovate the system (new lines and replacements). They are also going to spend $1.0 million to drill wells into a different area of the aquifer to relieve the current system. These projects are not expected to increase maximum capacity to the area. Any large increase of demand would require major investment.

EUNICE

Eunice currently services about 1,300 homes and businesses from several wells located about 20 miles from the city.[23] The service is mainly within the city limits. Eunice receives all of its water from the Ogallala Aquifer.

Capacity: The maximum capacity for the city's water system is about 4.3 mg/d. The average usage is about 2 mg/d, or less then 50% of capacity. Information for summer usage was not available.

Future Projects: The City of Eunice is currently in the process of upgrading the system. They are adding new wells and replacing the main lines in response to the expected growth associate particularly with the National Enrichment Facility. The capital improvements are expected to increase capacity, so that the system can serve between 10,000 and 15,000 people. This is

LEA COUNTY WASTEWATER CAPACITY

The larger communities in Lea County use modern wastewater treatment plants, but the smaller communities and rural areas rely on older systems or septic tanks.

HOBBS

---

[22] Conversation with Mr. Charles Kelly who is the Wastewater Manager for the City of Lovington, New Mexico on Thursday, March 15, 2007.

[23] Conversation with Roxy who helps manage the water for the City of Eunice, New Mexico on Monday, March 26, 2007.

The City of Hobbs serves about 11,500 homes and businesses with sewer service and wastewater treatment from the City's treatment plant.[24] Solid waste from the plant is sent to the landfill, while the effluent is sent to the agricultural areas and the oil fields.

Sewer services are provided to locations within the city limits of Hobbs, with a very small percent outside. In addition, about 2% of the homes in the service area use septic systems.

Capacity: The maximum capacity for the treatment plant in Hobbs is currently 3.5 mg/d. The system is running close to capacity with current usage. No sewer line information available.

Future Projects: The City of Hobbs is currently in the process of spending $35 million to expand the current treatment facility. This upgrade and new construction, which is expected to be completed by January 2009, will add 5 mg/d to the existing capacity of 3.5 mg/d, meaning that use will then be at about 41% of capacity. As noted above, the city also spends about $600,000 on maintenance to both the water and sewer lines.

Any large increase of demand would necessitate an expansion to the current pumping and storage system. This problem would not be easy to fix and will be expensive.

Lovington

The City of Lovington serves about 3700 homes and businesses.[25] The service is mainly within the city limits of Lovington, although a very small percent of service is outside the city. Currently no one within the city limits uses a septic system. The wastewater is treated exclusively at the city treatment plant. The effluent is reused for irrigation at a city owned farm to grow feed for animals.

Capacity: The maximum capacity for the treatment plant is currently 1.0 mg/d. The system is averaging about 700,000 g/d (about 70% of capacity) with current usage. Pipeline capacity is unknown.

Future Projects: There are no projects planned in the near future. The City of Lovington had recently finished an upgrade to a new system, spending $5.9 million. Any large increase of demand would require more sewer lines to be installed.

EUNICE

[24] Conversation with Mr. Tim Woomer who is the Director of Utilities for the City of Hobbs, New Mexico on Tuesday, March 13, 2007.
[25] Conversation with Roxy who helps manage the water for the City of Eunice, New Mexico on Monday, March 26, 2007.

The town of Eunice serves the wastewater needs of about 1300 homes and businesses.[26] The service is mainly within the city limits of Eunice. A small percentage of residents use septic systems within the service area. Wastewater from Eunice is treated in lagoons where it is allowed to evaporate or be used for irrigation. A new system is in the works as the current system is very old.

Capacity: The maximum capacity for the city is currently for 5,000 people. The system is actually running for between 3,000 and 3,500 people (about 60% to 70% of capacity). The volume in per day usage was unavailable as was information on the pipelines.

Future Projects: The City of Eunice is currently upgrading the main lines. They are also looking at upgrading the entire system, but such an overhaul is probably at least 5 years into the future. Because the planning for the new system is still in the very early stages, there is no information on possible capacity for the expected system. Any large increases in demand on the system would be very difficult in the short-term.

Eddy County Water Capacity

The populations within Eddy County, 74% of whom are concentrated in Carlsbad and Artesia, receive their water from the Ogallala and Capitan Reef Aquifers. The Ogallala Aquifer extends into Texas, Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, and Wyoming. The water table in Texas extends much further down then compared to both Lea and Eddy County. The Capitan Reef Aquifer is used by Carlsbad for home use and extends south into West Texas.

CARLSBAD

The City of Carlsbad services about 27,000 homes and between 10,000 and 11,000 businesses. There are two water systems. The city water system, which runs throughout the city and into some outlying areas, draws from the Sheep's Draw Aquifer, which is part of the Capitan Reef Aquifer.[27] The Sheep's Draw Aquifer is a slow replenishment water reserve. At current usage the aquifer is being depleted at 0.25 inches/year. The expected life with current usage is about 100 years. The second system, which is for industrial use, is known as the Double Eagle System and is part of the Ogallala Aquifer. This system includes service to the oil fields for about 35 mg/m and to WIPP.

Capacity: The City of Carlsbad has abundant water rights, but the city water system has a capacity of about 22 mg/d. During the winter the city uses about 4 to 6 mg/d

[26] Conversation with Roxy who helps manage the wastewater system for the City of Eunice, New Mexico on Monday, March 26, 2007.
[27] Conversation with Mr. Mike Abell who is currently the Water Superintendent for the City of Carlsbad, New Mexico on Friday, March 09, 2007.

(about 25% capacity). During the summer months, however, the city comes close to maximum capacity. This situation is exacerbated by the stretched resources in the Double Eagle Reservoir (Ogallala Aquifer) used by the industrial customers. Currently there is little extra capacity in either system during peak usage. Conservation is already being used in Carlsbad and this has allowed the city to better control the summer capacity issues. However, more could be done to encourage conservation.

Future Projects: There is a project to build a 5 million gallon reservoir in the Double Eagle System. On the residential side, there are several housing developments that need infrastructure. The extension of new housing would, in the short-term, put a strain on the water system as water lines would have to be extended and new sources of water would need to be established. The City of Carlsbad already has plans for a hydrological study to better prepare for future expansion.

Any expansion would require major changes in the size of the lines needed to service the new developments. This would be an expensive undertaking and would need to be contracted out.

ARTESIA

The City of Artesia services about 4800 homes and businesses. Service in Artesia extends to the city limits and some surrounding areas. The city uses 7 wells which tap the Ogallala Aquifer for it water needs.

Capacity: Artesia's water system has about a 6mg/d capacity. Average usage is about 3 mg/d (about 50% of capacity), however the system can reach close to capacity during the summer months.

Future Projects: Artesia is planning on increasing its pumping capability by adding two wells. One will be drilled while the other will be purchased. This will not increase the capacity in the system because the city will still need the water rights for any additional water. The city is also planning on adding another reservoir with a presently unknown capacity.

Any additional large scale demand on the water system will require the increase of line size and the extension of service area. This is expected to be very expensive.

EDDY COUNTY WASTEWATER CAPACITY

Whereas the more rural parts of the county use septic systems for waste disposal both Carlsbad and Artesia use modern treatment facilities to take care of the wastewater.

CARLSBAD

The City of Carlsbad services about 27,000 homes and between 10,000 and 11,000 businesses. Sewer service extends to the city limits; however, about 3% of the geographic area within the city limits is currently not covered, and an estimated 10% of the homes in Carlsbad use septic systems.[28] Wastewater in the sewer system is pumped to the treatment plant located about 3.5 miles East of Carlsbad and about 100ft from the Pecos River. Most of the wastewater goes into the Pecos River after being treated. The rest (less then 1 mg/d), which is not potable, goes to the golf course. The solid waste is mixed with wood mulch and other organics to produce a soil enrichment product utilized at City parks and others.

Capacity: The city treatment plant has the capacity of processing about 6 mg/d, but is currently running about 2.5 mg/d (or 42% of capacity) on average. The city could not estimate how much capacity was available in the sewer system itself.

Future Projects: The city is currently upgrading 3 or 4 lifting stations that are old and not functioning well. In addition, there are two housing subdivisions being constructed which will require adding one more lift station. The expected increase in capacity of the pipes will be between 0.5 and 1.0 mg/d. The treatment facility is also expected to receive an upgrade, but the project is still in the engineering research stage. The city expects the report to take about a year to complete. The Wastewater Manager estimates it will be between 2 and 3 years before the project starts and will take another 1.5 to 2 years to complete. This project is not expected to increase capacity at the facility.

Any serious increase in demand would be a problem because many of the lines would be too small to handle the change in demand. The current system would need to be replaced with larger lines to accommodate the increase.

ARTESIA

The City of Artesia provides sewer services to about 5000 homes and businesses mainly within the city limits of Artesia.[29] Few residents within the service area currently use a septic system for their wastewater. The wastewater is processed exclusively at the city treatment plant. The effluent is reused for irrigation and pumped to the local fields.

Capacity: The city treatment plant has a maximum capacity of 1.8 mg/d. The system is running at 1.1 to 1.2 mg/d (about 66% of capacity) with current usage. It is unknown how much capacity the sewer lines could handle.

---

[28] Conversation with Mr. Art Sena who is currently the Wastewater Superintendent for the City of Carlsbad, New Mexico on Friday, March 09, 2007.

[29] Conversation with Mr. Michael Stroud who is the Wastewater Supervisor for the City of Artesia, New Mexico on Tuesday, March 13, 2007.

Future Projects: The City of Artesia is currently in the process of expanding and upgrading the current treatment facility to handle between 2.5 and 3.0 mg/d. However, this plan is not complete. The city is also looking at upgrading the main lines through town to the treatment plant. The facility upgrade is almost done, with an expected completion within the year; however the replacing of the main lines could take much longer.

Any large increase demand on the system would lower the quality of the effluent.

HOSPITALS AND HEALTH CARE CLINICS IN EDDY AND LEA COUNTIES

Carlsbad

CARLSBAD MEDICAL CENTER

2430 W. Pierce Street
Carlsbad, NM 88220
Phone: 505-887-4100

Carlsbad Medical Center (CMC) is a full-service, 127-bed community-oriented hospital providing medical, surgical and restorative patient care for the Eddy County region.[30] The Carlsbad Medical Center has one main site and two medical office buildings, the Pecos Valley Medical Complex and the Southwest Medical Complex. Carlsbad Medical Center's sister facility is Lea Regional Medical Center in Hobbs, New Mexico.

The following hospital services are offered at this center: Bone Densitometry, Cardiac Catheterization Lab, Cardiopulmonary Services, Diabetes Self-Management Center, Diagnostic Imaging, Dietary Services, Emergency Care, In-Patient Rehabilitation, Intensive Care, Medical/Surgical/Pediatric Services, OR/Surgical Services, Outpatient Surgery, Pharmacy, Rehabilitation Institute, and Women's Services.

CMC **Emergency Department** provides emergency care 24 hours a day, seven days a week in an facility that was renovated in 2003. The Emergency Department has 12 patient care beds plus a trauma care room and treats an average of 55 patients daily. The emergency department uses a five-level triage system, endorsed by the Emergency Nurses Association, according to the resources required for each level of patient care. ER staff includes four full-time physicians, one part-time physician, and two full-time nurse practitioners.

The **Intensive Care Unit (ICU)** is an eight-bed treatment facility that combines coronary care with all other aspects of intensive care. Staff-to-patient ratio standard is 2-3 patients per nurse depending on the severity of the patient's illness.

CMC Laboratory is a full-service, state-of-the-art facility providing a full range of services to both inpatients and outpatients. Laboratory accreditation is awarded by the College of American Pathologists, U.S. Department of Health and Human Services, and the Food and Drug Administration. Inpatient services are provided 24 hours a day, seven days a week. Outpatient services are available in the CMC Hos-

[30] Information on the Carlsbad Medical Center is based on the Center's website http://www.carlsbadmedicalcenter.com and on interviews with hospital staff.

pital Laboratory Monday through Friday, 7 a.m. to 5:30 p.m. and on Saturday from 7 a.m. to noon.

The **Medical/Surgical/Pediatric** department has a capacity of 48 beds, with both private and semiprivate rooms available. Pediatric patients have private rooms that parents may stay in with their child. The Medical/Surgical/Pediatric Department has approximately 56 registered nurses, licensed professional nurses and certified nurse assistants to care for patients.

The **Surgical Services** at Carlsbad Medical Center offers a wide variety of procedures for Carlsbad and Southeastern New Mexico patients. This is a four-room surgical unit with two operating rooms and a recently added a second endoscopy room to the GI/Endoscopy lab.

CMC Rehabilitation Therapy Services provides both inpatient and outpatient services. Inpatient Rehabilitation provides services to the Transitional Care Unit (TCU), Inpatient Rehabilitation Unit, and Medical/Surgical Unit. This facility offers Occupational Therapy, Physical Therapy, Speech Therapy, and Massage Therapy -- all provided by licensed professionals.

The **CMC Women's Services Unit** delivers an average of 30 or more babies per month with the services of three Obstetricians, a Certified Nurse Midwife and registered/licensed nursing staffs. Features of the second-floor hospital unit include: Antepartum and Labor Care, Delivery Rooms, Postpartum Services, and Newborn/High-Risk Infant Nurseries. Patient rooms can be either semi-private or private, depending upon occupancy on the delivery date.

Pecos Valley Physician Group is a multi-specialty physician management group under Carlsbad Medical Center. This group covers a variety of specialties.

PRESBYTERIAN MEDICAL SERVICES

MATERNAL & CHILD HEALTH COUNCIL

Artesia

Artesia General Hospital
702 North 13th Street
Artesia, New Mexico 88210
Phone: 505-748-3333

Artesia General Hospital is a 34 bed critical access hospital.[31] The Emergency Room is open 24 hours and has 6 beds. AGH has the following services available: Emergency Room - 24 hours per day, Laboratory, Radiology General Diagnostic, Latest CT Equipment, Mobile MRI, Ambulatory (Day) Surgery Unit, Asthma Clinic, Pulmonary Rehabilitation Clinic, Sleep Lab, Nutritional Counseling, Cardiac Stress Testing, Pulmonary Function Testing, and Diabetic Outreach Department.

Patients needing more extensive treatment are usually transported to Lubbock, TX or Albuquerque, NM however this can vary due to the request of the patient and the available transportation company.

Hobbs

Lea Regional Medical Center
5419 N. Lovington Highway
Hobbs, NM 88240
Phone: (505) 492-5000

Lea Regional Medical Center (LRMC) is a licensed 250-bed facility offering the following services: Adult Mental Health Program, Cardiac Services, Case Management, Emergency Department, Gastroentology/Endoscopy Department, Inpatient Physical Rehabilitation Unit, Intensive Care Unit, Laboratory, Nursery, Obstetrics/Labor & Delivery, Outpatient Services, Pediatrics, Pharmacy, Rehabilitation Therapies, Respiratory Care Services, Sleep Study Center, Surgical/Orthopedics Unit, and Transitional Care Unit.[32]

The **Emergency Department** is equipped and staffed to respond to all emergencies on a 24-hour basis. A licensed physician is on-duty at all times along with nursing and ancillary staff who have specialized training in cardiac, medical, pediatric and trauma emergencies

The **Gastroenterology / Endoscopy Department** offer a variety of diagnostic and therapeutic procedures provided by a staff of specially trained nursing personnel under the supervision of a board certified Gastroenterologist and / or other physicians.

The **Intensive Care Unit** is staffed and equipped to provide intensive care for any medical or post surgical patient in critical condition. The hospital's seven-bed unit offers this concentrated level of 24-hour care for both short-term and long-term patients. The hospital's ICU nurses have specialized backgrounds and are all trained and certified in advanced cardiac life-support.

---

[31] Information on the Artesia General Hospital is from http://www.artesiageneral.com and interviews with hospital staff.
[32] Information is from http://www.learegionalmedical.com and interviews with hospital staff.

The LRMC **Laboratory** is a full service laboratory open 24 hours a day 365 days a year. The laboratory and laboratory staff are accredited by the College of American Pathologists (CAP), the Joint Commission on Accreditation of Hospital Organizations (JCAHO), American Medical Association (AMA), American Society of Clinical Pathologists (ASCP), and American Medical Technologists (AMT). LRMC's laboratory staff consists of a variety of specialties, including a pathologist, medical technologists, medical laboratory technicians, microbiologists, histotechnicians and phlebotomists.

The **Outpatient Surgery Area** was recently renovated. Patients are pre-admitted and arrive on the day of the surgery. After surgery, they are joined by family in a comfortable private room for recovery and are generally discharged within a few hours. Also available on an outpatient basis are laboratory services, x-ray and physical therapy.

Sleep Study Center is a recently opened two bed Lab to help diagnose and treat those who have Sleep Apnea and Obstructive Sleep Apnea.

The **Surgical/Orthopedics Unit** is devoted to the care of patients experiencing musculoskeletal disorders. Included in this area of care are those patients having had total joint replacements, trauma that involves the extremities, fractures, and back injuries.

The **Transitional Care Unit** provides restorative care to adults whose health and/or mobility has deteriorated due to an acute illness or surgery. Private and semi-private rooms are available, as well as dining, family and recreational areas. Services provided are Physical Therapy, Speech Therapy, Occupational Therapy, 24-Hour Nursing Services, Pastoral Services, Resident/Family Education, Social Services, Discharge Planning, Family Consultation Referral, Assistance Dietary Consultation, Activities Program, and Recreational Therapy.

Expansion Projects: Lea Regional has committed to an $8 million renovation project starting December 2006. In 2005, Lea Regional was remodeled and expanded with total estimated cost at $11 million. This expansion and renovation included the Outpatient Surgery Area and the Emergency Room. Lea Regional Medical Center also be expanded and moved the Rehabilitation Services Department. There are new renovations taking place in Women's health services unit. After the renovations are completed there will be seven private Labor, Delivery, Recovery, Postpartum rooms for patients to use during there stay as well as new technology. Recently, Lea Regional completed the new Sleep Lab Center to help diagnose and treat those who have Sleep Apnea and Obstructive Sleep Apnea. Currently, the LRMC Cardiology program is temporarily on hold while recruiting two cardiologists. Lea Regional Medical Center's Emergency Department is equipped and staffed to respond to all emergencies on a 24-hour basis. The Lea Regional Emergency Room was recently renovated and expanded. This $5.5 million project added two new entrances, new pa-

tient waiting area, vending and triage areas, ten exam rooms, two trauma rooms and a new nurse's station.

Lovington

Nor Lea General Hospital
1600 N Main Ave
Lovington, NM 88260
(505) 396-6611

Nor Lea General Hospital is a small 26 bed medical facility located in Lovington, New Mexico. The ER has a basic trauma unit for critical care. Patients needing more extensive treatment can be transported to Lubbock, TX or Albuquerque, NM. Nor Lea also runs three local clinics that offer basic health services. The clinics are located in Lovington, Jal, and Tatum.

Nor Lea General Hospital offers the following medical resources:

- Emergency Department, offering 24-hour care by board-certified physicians and RNs trained in advance life support;
- Homecare;
- Imaging;
- Laboratory Services, with three collection sites;
- Respiratory Department staffed by six therapists, from 6 a.m. to 10 p.m. Monday through Friday, with on-call staff after hours to provide service to the hospital Emergency Room. Outpatient services are also provided to Lovington Clinic (Cardiology), to Nor-Lea Sleep Center, and to Cardiac Rehabilitation;
- Physical Therapy
- Podiatrist.[33]

Lovington Good Samaritan Center
17th & Ave. I
Lovington, NM
(505)396-5212

The Good Samaritan Center is a 62 bed facility owned and operated by the Evangelical Lutheran Good Samaritan Society, a Christian non-profit organization based in Sioux Falls, S.D.[34] The center provides 24 hour nursing service. Residents are under the care of a physician of their choice.

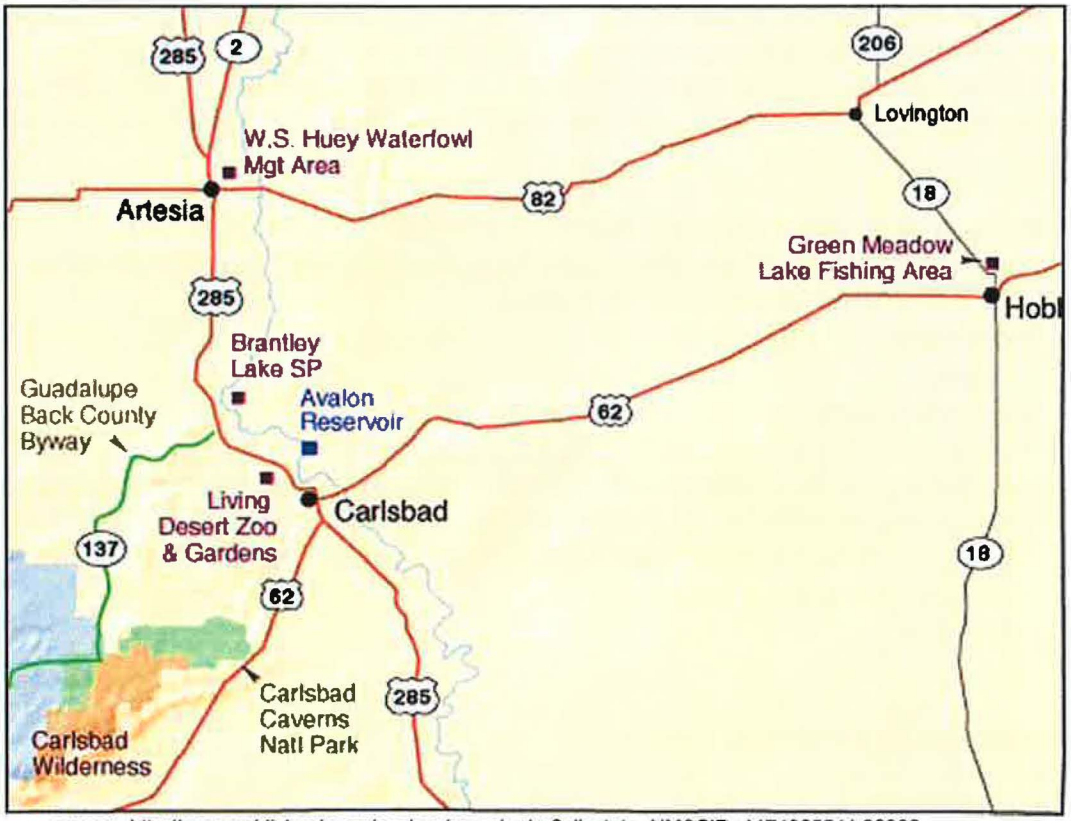
[33] Information is from http://www.nlgh.org and interviews with hospital staff.
[34] Information is from http://lovington.leaco.net/family.htm.

PARKS AND RECREATIONAL FACILITIES

MAJOR NATIONAL & STATE PARKS IN SOUTHEASTERN NEW MEXICO

There are abundant outdoor recreational opportunities is close proximity to the proposed ELEA site for GNEP. Figure 1 displays some of major national and state parks in the immediate vicinity of the site. Each of these areas is discussed in the text which follows. The information provided consists primarily of excerpts from the websites indicated.

Figure 1: Major Parks and Recreational Areas in Lea and Eddy Counties



source: http://www.publiclands.org/explore/search.php?plicstate=NM&SID=1174865541.22002

Carlsbad Caverns National Park

Carlsbad Cavern is one of over 300 limestone caves in a fossil reef laid down by an inland sea 250 to 280 million years ago. The park contains 113 of these caves, formed when sulfuric acid dissolved the surrounding limestone, creating some of the largest caves in North America. The park offers a variety of cave tours – from the self-guided areas of the Big Room to crawling through narrow passageways in the

Hall of the White Giant or in Spider Cave – as well as opportunities for hiking and backcountry camping. The park's cultural resources represent a long and varied continuum of human use starting in prehistoric times, illustrating many adaptations to the Chihuahuan Desert environment. The park has two historic districts on the National Register of Historic Places, the Cavern Historic District and the Rattlesnake Springs Historic District. The park museum, including the park archives, contains about 1,000,000 cultural resource specimens that are being preserved and protected for future generations. Programs are offered at the visitor center. Mexican free-tail bats make an impressive exodus out of Carlsbad Cavern at dusk in the summer. (http://www.nps.gov/cave/)

The **Carlsbad Wilderness** is the desert backcountry surrounding Carlsbad Caverns National Park, with scattered sotol, agave and juniper vegetation. (http://www.publiclands.org/explore/site.php?id=92&PHPSESSID=23cfeb7c9)

Contact Information
Carlsbad Caverns National Park
3225 National Parks Highway
Carlsbad, New Mexico 88220
General Park Information

(505) 785-2232

Bat Flight Information

(505) 785-3012

Fax: (505) 785-3122

Guadalupe Mountains National Park

The rock exposures in Guadalupe Mountains National Park are part of one of the finest examples of an ancient fossil reef. It is largely because of the area's geologic importance that it became a National Park in 1972. Rising from the desert, this mountain mass contains portions of the world's most extensive and significant Permian limestone fossil reef, formed about 250 million years ago. Also featured are a tremendous earth fault, lofty peaks, unusual flora and fauna, and a colorful record of the past. Guadalupe Peak, highest point in Texas at 8,749 feet; El Capitan, a massive limestone formation; McKittrick Canyon, with its unique flora and fauna; and the "bowl", located in a high country conifer forest, are significant park features. Activities include backpacking, camping, hiking, photography, star gazing, wildlife watching, ranger-led activities, natural history exhibits, desert wild flowers, and horseback riding. (http://www.guadalupe.mountains.national-park.com/)

Location: 55 miles southwest of Carlsbad on Highway 62/180

Contact Information:
400 Pine Canyon Road
Salt Flat, Texas 79847
Phone: Headquarters Visitor Center (Pine Springs)
(915) 828-3251
Dog Canyon Ranger Station :(505) 981-2418
Fax :(915) 828-3269
Phone: 915-828-3251

Guadalupe Back Country Byway

Length: 30 miles / 48.0 km

The Byway is a 30 mile road which begins at U.S. 285 twelve miles north of Carlsbad in the Chihuahuan Desert and ascends about 3,000 feet into the Guadalupe Mountains. The terrain gets rugged quickly. Large patches of prickly pear and sotol grow out of cream-colored limestone outcrops. The desert landscape, beautiful as it is, conceals beauty and riches perhaps unsuspected by its earliest Paleo-Indian inhabitants 10,000 years ago. From the highest point, the byway continues down N.M. 137 for several more miles, until the road intersects the boundary of the Lincoln National Forest. The road continues through southern New Mexico into Texas. There are 16 miles of hiking trails in the recreational area, varying from 1.5 to 6.6 miles long. *(www.nmtourism.org)*

Contact Information
(505) 887-6512
Email: stephen@plia.org
Guadalupe Back Country Byway
Carlsbad Field Office P.O. Box 1778 620 E. Green St.
Carlsbad, NM

Living Desert Zoo & Gardens

Dedicated to the interpretation of the Chihuahuan Desert, Living Desert State Park is an indoor/outdoor living museum displaying more than 40 native animal species and hundreds of succulents from around the world. While on the 1.3 mile self-guided tour, which takes approximately 1.5 hours, visitors will discover sand dunes and mountainous areas, where pinion and juniper trees contrast with the desert floor below. One of the park's main highlights is endangered Mexican wolves. Living Desert participates in the American Zoo and Aquarium Association's Mexican gray wolf Species Survival Plan Program, exchanging wolves with other zoological facilities to help insure their survival. (www.emnrd.state.nm.us/PRD/LivingDesert.htm)

Contact Information:
Email: KBritt@state.nm.us
Living Desert Zoo & Gardens
P.O. Box 100
Carlsbad, NM 88221
(505) 887-5516

Brantley Lake State Park

Brantley Lake State Park is New Mexico's newest state park and includes a 3,000-acre lake on the Pecos River (6,500 acres at flood pool) created by the construction of the Brantley Dam. The project's main purpose is to replace McMillan Dam, which was declared unsafe. Additional benefits include irrigation, flood control, fish and wildlife enhancement, and recreation. The park offers trails, camping, boating, a variety of water sports, and fishing for warm water fish, including largemouth bass, walleye, channel catfish, white bass, bluegill, and crappie. (http://www.emnrd.state.nm.us/PRD/ParksPages/Brantley.htm)

Contact Information:
(505) 457-2384
Email: AStiteler@state.nm.us
Brantley Lake State Park
P.O. Box 2288
Carlsbad, NM 88221

Avalon Reservoir

Very shallow 5-6' deep, 66 acre lake on the Pecos River 3 miles north of Carlsbad, New Mexico. The dam is an earth-fill structure constructed in 1907. Recreation at Avalon Reservoir is managed by the Carlsbad Irrigation District under an agreement with the Bureau of Reclamation. The Avalon Reservoir is stocked by the New Mexico Department of Game and Fish, which also provides law enforcement for all boating activities. Boating fees are charged. Fishing is available year-round, predominantly for white bass, catfish, and bream. Scuba diving for game fish is permitted.
http://www.emnrd.state.nm.us/PRD/BOATINGWeb/boatingwatersavalonreservoir.htm
Contact:
Avalon Reservoir
Carlsbad Irrigation District
201 S. Canal St. Carlsbad
NM, 88220
Phone: 505-885-3203
Information: (505) 885-6263.

The W. S. Huey Waterfowl Area

This area combines the former Artesia Waterfowl Area, 640 acres, and the Karr Farm, 2,240acres. It was purchased by the U.S. Bureau of Reclamation to mitigate habitat changes caused by the Brantley Dam downstream on the Pecos River. Dedicated Sept. 6, 1986, it was named for the man who was director of the Department of Game and Fish from 1975-78 and secretary of Natural Resources Department from 1978 to 1983. Here, sharp-eyed sandhill cranes, large flocks of snow geese, and other flights of waterfowl stop to rest and feed after a long fall journey from the far north. Primary crops are small grains, alfalfa and clover, and provide feed for snow geese, cranes, ducks, and Canada geese. The area also accommodates nesting geese and ducks. Other species in the area include pheasant, quail, dove, antelope, deer and fur bearers. Visitors may take a self-guided tour of the area. There are no picnicking or camping facilities at the site.

(http://www.wildlife.state.nm.us/conservation/wildlife_management_areas/documents/WSHueyWA.pdf)

Other parks and recreation areas.

Black River Recreation Area

The 1,200-acre Black River Recreation Area is managed to provide low-impact recreation and environmental education opportunities while maintaining a healthy river system and riparian habitat. This river corridor acts as a transition zone between the limestone foothills of the Guadalupe Escarpment and the southern gypsum soils to the east. Several spring-fed pools within the area comprise the headwaters of the Black River. The area includes a series of deep, elongated pools interconnected by a shallow, narrow stream.

The Black River, an oasis in the Chihuahuan Desert, is home to rare species of plants, fish and reptiles in and around the river. During migration seasons, the area teems with birds, including waterfowl, shorebirds and songbirds. Bird populations in this small area fluctuate daily and seasonally. Visitors may observe green-backed herons, orchard orioles, yellow-billed cuckoos, and roadrunners. Lush desert vegetation and clear pools of water provide excellent opportunities for viewing wildlife. The recreation area's most frequently visited site is the Cottonwood Day Use Area, which includes a wildlife viewing platform, picnic tables, and a toilet. The parking area is approximately 500 feet from the water's edge. (http://www.nm.blm.gov/recreation/carlsbad/black_river_rec_area.htm)

The Black River Recreation Area is located about 26 miles southwest of Carlsbad, NM. From Carlsbad, take US 62/180 south for about 25 miles and turn west onto CR 418. Travel another 2 miles and turn left at the fork.

Contact Information:
Carlsbad Field Office
620 E. Greene ST.
Carlsbad, NM 88220
505.234.5972

Bottomless Lakes State Park

In 1933 the bottomless lakes area was set aside as New Mexico's first state park. Lea Lake is the deepest at 90 feet and is the only lake where swimming is allowed. During summer, visitors can rent paddleboats for a small fee. Devil's Inkwell is 32 ft. deep and is named for its steep sides and dark water, the result of algae growth. The lake is stocked with rainbow trout in winter. Lazy Lagoon is surrounded by treacherous and odorous mud flats, making in inaccessible for recreation but a great place to view waterfowl that are often present. Recreational opportunities at Bottomless Lakes include camping, picnicking, fishing, boating, sailing, and wildlife viewing. The Park also has a trail system open to hiking and site seeing. The area is also famous for its "Pecos Diamonds", which are actually quartz crystals formed inside the gypsum in the soil. The soft gypsum sometimes crumbles away, exposing the "diamonds". (www.emnrd.state.nm.us/PRD/bottomless.htm)

Contact Information
Email: SPatterson@state.nm.us
Bottomless Lakes State Park
HC 12, Box 1200
Roswell, NM 88201
505-624-6058

Hackberry Lake

The Hackberry Lake Off-Highway Vehicle (OHV) area offers over 55,000 acres of rolling stabilized dune lands and cliffs. The area is open for intensive use of motorcycles, sand dune buggies and other OHVs. Trails within the area take advantage of a variety of soils and topographic features, which include many turns and steep hill climbs. Routes go from shallow rocky, loamy soil on low hills to deep alluvial soils with sandy inclusions. The trails travel across small draws and along the bottom of deep arroyos. The area also includes a sand dune complex. The area is used by the Desert Rough Riders Club for an annual competitive motorcycle event - the Carlsbad 100 Desert Race -- which traverses more than 44 miles of public land. (www.nmdrc.com.)

Hackberry Lake OHV Area is about 20 miles northeast of Carlsbad, NM, and can be accessed at a number of locations. To access the most commonly used parking area, follow US 62/180, turn north on SR 360, and travel approximately 5.7 miles and turn east on CR 222. The parking lot is on the north side of the road.

Contact Information:
Carlsbad Field Office
620 E. Greene ST.
Carlsbad, NM 88220
505.234.5972

La Cueva Non-Motorized Trail System

The La Cueva Non-Motorized Trail System covers approximately 2,200 acres and contains more than 15 miles of maintained trails. The non-motorized trails are conveniently located near the city limits of Carlsbad, and are primarily used by mountain bikers, hikers, and equestrians. The trails wind through the rolling limestone foothills of the Guadalupe Mountains and the rugged Chihuahuan Desert environment. A wide variety of cactus and wildlife add to the desert experience. The La Cueva Non-Motorized Trail System is located partially within the city limits of Carlsbad, NM, on its south-west side.
(http://www.nm.blm.gov/recreation/carlsbad/la_cueva.htm)

Contact Information
Carlsbad Field Office
620 E. Greene ST.
Carlsbad, NM 88220
505.234.5972

Lincoln National Forest

Located in South Central New Mexico, the **Lincoln National Forest** consists of three ranger districts; Sacramento, Smokey Bear and Guadalupe. There are three major mountain ranges; Sacramento, Guadalupe and Capitan that cover 1,103,441 acres in parts of four counties in southeastern New Mexico. Elevations of 4,000 to 11,500 feet pass through five different life zones from Chihuahuan desert to sub-alpine forest. Vegetation ranges from rare cacti in the lower elevations to Engelmann spruce in the higher. (http://www.fs.fed.us/r3/lincoln/aboutus.shtml

Contact Information
1101 New York Ave.
Alamogordo, New Mexico
88310
505. 434.7200

CARLSBAD PARKS AND RECREATIONAL FACILITIES

City of Carlsbad Parks and Recreation Department

The department maintains approximately 1,204 acres of parks within the City of Carlsbad and is responsible for maintenance of all playground equipment, fishing piers and boat docks located within the park areas. In addition to maintaining, lands, buildings and equipment, the Department assists with all special events and recreational activities, including the 16th of September Celebration, Heritage Days, and Art-A-Fair, 4th of July celebration and various sporting and other events.

Below is a listing of parks and recreational facilities within Carlsbad, New Mexico. For information, the telephone number is (505) 885-6262. The information is from **http://www.cityofcarlsbadnm.com/.**

Alta Vista Park 312 Alta Vista/1707 W. Fox
Located west of Alta Vista Middle School, this park consists of 15 acres and houses the American Little League with three (3) playing fields and the Senior Little League with one playing field.

Arcadia Park 1311 Ortega
Located in the 1300 block of Alvarado/Ortega Streets, this neighborhood park is 4 acres with playground equipment and a basketball court.

Bataan Recreation Area
Located on both sides of the Pecos River from the Tansil Dam to the Lower Tansil Dam, this area is included in the Lake Carlsbad Recreation Area and has shades, boat docks and during "ball" season is utilized by many ball teams for practice areas.

C. H. McLenathen Park 1305 W. Hagerman
This neighborhood park is located at the corner of North Maple/West McKay/West Hagerman Streets. This 3 acre park is the home of the National Little League with 3 playing fields, playground equipment and a basketball court.

Carlsbad Softball Complex/Will Merchant Park 902 Hidalgo
Located west of the National Parks Highway at the intersection of Hidalgo Road and South Boyd Drive, this 21 acre park has 4 lighted fields, restroom facilities, a small playground area and off-street parking.

Cass Park
Located at Kuykendahl and Russell Streets in the Sunnyview Addition, this neighborhood park consists of 1.9 acres and has basketball court and playground equipment.

Chief Ira J. Stockwell Park 400 NE 1st
Home of the Teen Girls Softball League, this 5 acre park is located along the irrigation canal on Northeast First Street. There are two playing fields and one practice field.

Cruz Fernandez Park 606 Pompa
Located in the 500 block of Pompa Street at Chavez Street, this 3 acre neighborhood park consists of playground equipment and a basketball court.

Davis Park
Located in the 200 block of Kircher Street at Davis Street, this 9 acre neighborhood park hosts playground equipment.

Hardwick/Jackson
This elementary school park is located in the 2400 block of Carver Street and is considered a joint city/school playground area.

Hall Addition Park
With approximately 1.5 acres, including parking area, this neighborhood park with playground equipment is located on North Street between Primrose and Wildrose Streets south of Puckett School.

Heritage Park 1500 Callaway Drive
Located on Callaway Drive on the south side of the Pecos River, this historical park contains the first homestead built in the County of Eddy, The Eddy House. There is a

covered picnic shelter where an annual event is held honoring the pioneer families of Carlsbad and surrounding areas.

Lake Carlsbad Recreation Area
With 125.6 acres, this park winds along the Pecos River from the railroad bridge south to the upper Tansil Dam. This area contains playground equipment, barbecue grills, tables, restrooms, boat docks, swimming area and the Beach Bandshell. The Lake Carlsbad Recreation Area is 125.6 acres located along the Pecos River from the railroad bridge south to the upper Tansil Dam. This area is used for picnics, water sports, playgrounds and fishing and boating. There are many areas for picnics in shaded areas with picnic tables and grills. There is a swim area that is open to the public from Memorial Day weekend through Labor Day weekend.

Lamont Street Park
Located along the west side of Lamont Street between Church Street and the Northgate Shopping Center on Pierce Street, this 4.9 acre park offers a paved path for walkers, joggers, bicyclists and others enjoying a portion of the Bike/Walk/Jogging Trail which parallels this park area.

Little Girls Softball Complex 511 Park Drive
Located on Park Drive west of the Tansil Dam, this 3 acre park provides 4 playing fields for the Little Girls Softball Association.

Lake Carlsbad Municipal Golf Course 901 N. Muscatel Avenue
Lake Carlsbad Golf Course is located at 901 N. Muscatel Avenue. The nine hole par 3 course runs along the Pecos River and the regulation 18 hole course is situated in the foothills east of the river. At 6,120 yards, the par 72 regulation course is not long, but the tight fairways, changes in elevation, and small greens offer a variety of challenges to the player, no matter what his skill level is. Several new tees have been added in recent years to add length and difficulty. The course is irrigated primarily with effluent water from the City of Carlsbad's Waste Water Treatment Facility. Composting of solid waste at this same facility provides Humus for application to tees and fairways.

The par 3 course is 1,300 yards long, par 27, and presents holes varying from 80 yards in length to 230 yards. The course is easily played in under an hour and is ideal for beginning golfers, seniors and junior golfers. The pro shop staff can be reached at (505) 885-5444 to obtain tee times, or for information on tournaments, lessons and merchandise. The hours of operation are 7:00 a.m. to sunset.

Desert Willow Park 1612 Desert Willow Drive
This 1.6 acre neighborhood park hosts various pieces of playground equipment.

Pecos River Village Recreation Area
Located on the east side of the Pecos River off of Muscatel Avenue, this recreation

area hosts the Pecos River Village Conference Center, Riverwalk Recreation Center, and Playground on the Pecos.

Puckett Park
This 1 acre neighborhood park is located on the east side of Puckett School in Hall Addition. Belonging to the Carlsbad Municipal School System, this park provides limited playground equipment.

Plaza De San Jose
Located at San Jose Boulevard/Plaza Street/DeBaca Street this 7.5 acre park area contains a band stand, small playground and is host to the annual 16th of September Celebration along with other community-wide celebrations.

Riverside Country Club Park
This 1 acre neighborhood park with various playground equipment is located at the intersection of Bryan Circle and Park Street within the County Club Addition.

Riverview Park
Located on the north side of Lake Carlsbad between the railroad tracks and the Par 3 Municipal Golf Course, this 7.21 acre park provides 3 large covered picnic shelters with tables and restroom facilities.

Senator Milton R. Smith Park
This 2 acre neighborhood park consists of small playground equipment and is located at North Mesa and West Church Streets.

Senior High School Baseball and Softball Park
These parks consist of approximately 13 acres of land with lighted baseball and softball fields. A joint City/School agreement developed this complex which is located west of North 8th Street and east of the Carlsbad Senior High School Football stadium.

South 8th Street Neighborhood Park
Located in the 500 block of S. 8th Street at Florida Street, this .87 acre neighborhood park provides playground equipment and a lighted basketball court.

Sports Complex
Located across from the south end of the Lake Carlsbad Recreation area near the Tansil Dam, this 11.36 acre recreation area houses the Lake Carlsbad Tennis Complex, Rio Pecos Tennis Shop, 3 racquetball courts, the Soccer complex with 3 fields and restroom facilities.

Lake Carlsbad Recreation Area is 125.6 acres located along the Pecos River from the railroad bridge south to the upper Tansil Dam. This area is used for picnics, water sports, playgrounds and fishing and boating. There are many areas for picnics in

shaded areas with picnic tables and grills. There is a swim area that is open to the public from Memorial Day weekend through Labor Day weekend.

Also located in this area is the **Carlsbad Bandshell** where annual events are held, such as the Relay for Life, Art-A-Far, United Way Community Day, Hawgfest, Chili Cook-Off and the Fireworks Display each July 4th, to name a few. The area is also widely used by walkers for exercise. There is a 6 mile sidewalk around the entire area which is also used for several area walkathons and an annual triathlon race. At the south end of the park is the 11.36 acre sports complex that contains 9 tennis courts, a tennis pro shop, 3 racquetball courts and three soccer fields with restrooms

Carlsbad Spring Park - Carter Park
Located at the northwest end of Lake Carlsbad on the south side of the Pecos River, this 27 acre natural park area extends west from the springs and adjoins US Highway 285.

Sunset Park 1802 W. Blodgett
Consisting of approximately 5 acres, this park area is located along the CID irrigation canal at Blodgett and Solana Streets. Home of the Shorthorn Little League, this park provides 4 playing fields, playground equipment and a lighted basketball court.

Troy Young Community Park 2207 San Jose Boulevard
Located on San Jose Boulevard and bordering the CID irrigation canal, this 6 acre neighborhood park has a basketball court, tennis court and playground equipment.

West Carlsbad Recreation Area 611 N. 5th Street
This 4 acre neighborhood park is located in the 600 block of N. 5th Street and consists of tennis courts, basketball courts, a volleyball court and playground equipment.

Dr. Martin Luther King Jr. Memorial Park
Located on the corner of Canyon Street and Plaza Street and part of the Bataan Recreation Area, this park contains playground equipment and a covered picnic shelter.

Shooting Range/Action Sports Complex
Consisting of approximately 645 acres, this complex is located approximately 2.5 miles north of Happy Valley on the east side of the truck by-pass leading to the Artesia Highway (US 185). The area provides 4 trap ranges, pistol range, small bore rifle range, large bore rifle range, silhouette rifle range, silhouette pistol range, muzzle loaders range, black powder range, archery range, cross-wind runways for radio controlled model airplanes, a competition go-cart track, restroom facilities and picnic areas.

Alejandro Ruiz Memorial Park
Located in front of the Riverwalk Recreation Center and adjacent to Playground on

the Pecos, this park area honors Carlsbad native and WWII Veteran Alejandro Ruiz for his receipt of the Congressional Medal of Honor.

Millennium Park
Located south of the Riverwalk Recreation Center, this park houses a TruPac container containing packages from area families and organizations to be opened in the year 2101. These articles were sealed in the container on November 11, 2001. This park and TruPac Time Capsule was sponsored by the Carlsbad Assistance League.

Playground on the Pecos
Rising on the banks of the Pecos River north of the Riverwalk Recreation Center, this community-built playground consists of 15,000 square feet of towers, swings, slides, and hiding places. Designed with the help of Carlsbad's school children, the playground incorporates Carlsbad features such as caves, rock climbing areas and the flumes. Utilizing volunteers, construction began on September 5, 2002 and was completed on September 15, 2002.

Bike/Jogging/Walking Trail
This 6.4 mile, 5-foot wide asphalt recreational trail is for use by bicyclists, joggers, and walkers. It is located along the Carlsbad Irrigation District Canal and runs the entire length of the city. At the user's preference, the trail may be accessed at either point located at the National Parks Highway, San Jose Boulevard, Boyd Drive, Lea Street, Texas Street, Church Street, Pierce Street, and/or Westridge.

Ocotillo Hills Nature Trail Skyline Drive/NMSU-Carlsbad/Heritage Park
The Ocotillo Hills Nature Trail courses along the hillside between Skyline Drive and New Mexico State University-Carlsbad. The trail is 0.9 miles in length and provides a scenic hike that highlights many of the native plants and, at times, the wildlife. A scenic overlook parking area is located at the top of the trail providing a spectacular view of the entire city, particularly at night.

ROSWELL PARKS AND RECREATION FACILITIES

City of Roswell Recreation Department

The **Roswell Recreation Department**, which is the largest provider of recreation for the City, works with many different agencies to provide recreation for the entire community. Besides managing the Cahoon Park Swimming Pool, Roswell Adult Center, and the Yucca Recreation Center, the Department is also responsible for many Special Programs and Events. (http://roswell-usa.com/city/recreation/index.htm)

Cahoon Park Swimming Pool

The Cahoon Park Swimming (5th & Union) is open to the public during the summer months. It is an outdoor swimming pool that provides swimming lessons to over 500 youth a year. There is an allotted time for senior swim lessons, lap swimming, and open family swim. The pool is available for group rentals after general public swim hours and water basketball and water polo are played. Seasonal: Memorial Day - Labor Day
Open Swim Hours: Monday, Wednesday, Friday: 1:00-7:00 p.m. Tuesday, Thursday, Saturday, Sunday: 1:00-6:00 p.m. Contact 505.624.6764.

Roswell Adult Center

The Roswell Adult Center (807 N. Missouri) is a facility that is open to all adults over the age of 18. Even though the majority of the participants are senior citizens, all are encouraged to participate in the course offerings and activities. The RAC offers the community a comprehensive program of social, educational and recreational activities. The Center offers over 60 classes per session that may include languages, needlecrafts, writing, ceramics, dance and the fine arts. The Center also has various special event offerings such as the Hobby Show, Fall Fair, Christmas Gift Fair, Arm Chair Travel, and Legal Assistance. In the evenings, there are fitness classes, country & western dance and line and square dancing. This is a division of the Department with a strong volunteering base, and many service groups utilize the center. Telephone 505.624.6718. (*http://roswell-usa.com/city/recreation/index.htm*)

Special Programs

The Roswell Recreation Department sponsors/co-sponsors many outdoor activities throughout the year. These activities are designed to promote quality of life and personal growth among its participants. Special events include the Neighborhood Park Programs, Volkmarches, Fishing Derby, Roswell Games, Party on the Pecos, Kite Festival, Hershey's National Track & Field Program, Festival in the Park, Tennis Lessons and League, Summer Concert in the Park Series, Summer School Ground Program, Therapeutic Recreation Program, Competitive Runs, Summer Fun & Fitness and much, much more. Special Programs allow the Department to work with other outside sport organizations i.e., Little Leagues, soccer association, softball associations, and football leagues. Telephone 505.624.6720. (*http://roswell-usa.com/city/recreation/index.htm*)

Yucca Recreation Center

Yucca Recreation Center (500 S. Richardson) is a recreation center that is used mainly by the youth. However, there is a Co-Ed Volleyball League, 3 on 3 Basketball League, and Aerobic Fitness Classes for adults. Many classes are held throughout the year for the public to enroll in such as dance classes, karate, ceramics and much more. The Yucca Recreation Center also is the provider of the City Wide Youth Basketball League and Special Events such as the Easter Egg Hunt, Fall Fiesta, and the Spring Finale. The Vacation Fun Program for children runs throughout the year and is provided for in-service/holidays. Telephone 505.624.6719. (*http://roswell-usa.com/city/recreation/index.htm*)

Other Facilities and Parks near Roswell, New Mexico

This information is from the following website:
http://www.roswellnm.org/

Lakes near Roswell, New Mexico:

Chain Lakes, Chaves County, New Mexico, 8 miles away

Cottonwood Lake, Chaves County, New Mexico, 10 miles away

Dimmitt Lake, Chaves County, New Mexico, 10 miles away

Durand Reservoir, Chaves County, New Mexico, 8 miles away

Figure Eight Lake, Chaves County, New Mexico, 10 miles away

Inkwell Lake, Chaves County, New Mexico, 10 miles away

Lea Lake, Chaves County, New Mexico, 10 miles away

Mirror Lake, Chaves County, New Mexico, 10 miles away

Pasture Lake, Chaves County, New Mexico, 10 miles away

Peters Lake, Chaves County, New Mexico, 5 miles away

Lake Van, Chaves County, New Mexico, 9 miles away

Golf Courses near Roswell, New Mexico:

New Mexico Military Institute Golf Course

This 18-hole course at the New Mexico Military Institute Golf Course facility (201 W 19th St) in Roswell features 6,689 yards of golf from the longest tees for a par of 72. The course rating is 70.1 and it has a slope rating of 116 on Bermuda grass. Designed by Floyd Farley, ASGCA, the New Mexico Military Inst. golf course opened in 1957. Crae Fields manages the course as the Golf Professional. Telephone (505) 622-6033. (http://www.golflink.com/)

Roswell Country Club

This facility at 2601 Urton Road, 3 miles from the center of Roswell, has a 9-hole course of over 3,053 yards with a par of 36, Private Equity. Telephone (505) 622-2050. *(http://www.golflink.com/)*

Spring River Golf Course, Roswell, New Mexico

This municipal facility at 1612 W 8th St, 1 mile from the center of Roswell, has 18 holes, over 6,488 yards, with a par of 71. Telephone (505) 622-9506. *(http://www.golflink.com/)*

HOBBS PARKS AND RECREATIONAL FACILITIES

The sections of the City of Hobbs website relating to recreation and youth services are under construction. The information which follows on Hobbs facilities was compiled from the following website: http://www.hikercentral.com/metros/26020.html

State Facilities and Parks

Lakes near Hobbs, New Mexico:

Twin Lakes, Lea County, New Mexico, 5 miles away

Green Meadow Lake, Lea County, New Mexico (see above), 12 miles away

Red Lake, Lea County, New Mexico, 14 miles away

Dry Lake, Lea County, New Mexico, 23 miles away

Floyd Lake, Lea County, New Mexico, 25 miles away

Rainy Lake, Lea County, New Mexico, 25 miles away

White Lake, Lea County, New Mexico, 23 miles away

Golf Courses near Hobbs, New Mexico:

Ocotillo Park Golf Course, Hobbs, New Mexico, 14 miles away

County of Gaines Golf Course, Denver City, Texas, 34 miles away

Yoakum County Golf Course, Denver City, Texas, 34 miles away

Gaines County Golf Course, Seminole, Texas, 45 miles away

Winkler County Golf Course, Kermit, Texas, 60 miles away

Recreational Facilities

The following information is from www.hobbschamber.org. Sport enthusiasts will find that Hobbs features one of the most affordable public golf courses in a 100-mile radius, the Ocotillo Golf Course. The Ocotillo Course also offers one of the best jogging trails in the area. Other amenities to be found in Hobbs include numerous public parks, health clubs, the Zia Softball Complex, baseball fields, swimming pools (including the water park which opened in 2002), shooting range, archery range, bike trails, tennis courts, and a full service country club with pool and golf course. Additionally the Martin Luther King Soccer Complex includes eight soccer fields and a walking trail. For campers Hobbs offers excellent facilities with full RV hook-ups at Harry McAdams Park.

LOVINGTON PARKS AND RECREATION FACILITIES

The following information is from http://lovington.leaco.net/family.htm.

City of Lovington

The City operates and maintains five city parks, one swimming pool, eleven baseball fields, numerous practice fields for little league and one shooting range

Lovington Country Club

This small town course on Highway 70 affords an extremely friendly atmosphere. The course has wide, but tree-lined fairways and fast greens. There is a small lake that comes into play on a couple holes. Telephone (505) 396-6619.

SOCIAL ASSISTANCE PROGRAMS IN SOUTHEASTERN NEW MEXICO

This section provides an overview programs available in Lea and Eddy counties for the cities of Carlsbad, Artesia, Hobbs, and Lovington.

REGIONAL PROGRAMS

Southeast New Mexico Community Action Corporation[35]

Southeast NM Community Action Corporation (SNMCAC) is a private non-profit organization providing social assistance programs for Eddy, Otero, Chaves, Lea and Lincoln Counties. This agency develops programs which produce immediate benefits and provide support and assistance for those in the community who are in need of and eligible for services.

SNMCAC provides a **Child & Adult Care Food Program**. The primary objective of this program is to improve the health and eating habits of participants enrolled in family day care and adult care homes and centers. The Program offers reimbursement to the provider of these services for nutritious meals served. Reimbursement can be claimed for two main meals plus one snack or two snacks and one main meal. Eligibility requires that children be 12 years of age or under. Children of migrant workers can be 15 years of age. Disabled children at any age are eligible if the majority of enrollees are 18 years of age or under. Nutrition education and assistance with menu planning are also provided free of charge to participating homes and centers through workshops and in-home visits. Currently, 1204 children and 234 homes are enrolled in this program. Funding is provided by the State of New Mexico: Children, Youth and Families Department.

CSBG Rent/Mortgage Payments and Utility Assistance provides funding for past due bills if the applicant meets the income guidelines and provides the required documentation. Funding is provided for direct assistance to the applicant that meets the income guidelines and provides the required documentation. This program will also provide prescription assistance if the client does not have Medicaid, health insurance, or Worker Compensation. Emergency Relief is a local cash donation from the Carlsbad Ministerial Alliance that is issued through the Carlsbad Foundation. Assistance is only provided for residents of Carlsbad.

FEMA Assistance is also offered if the applicant meets the income guidelines and provides the required documentation. Funds must be used to meet emergency food or shelter needs only. .SNMCAC has entered into a partnership with Group Work camps that will allow youth and teens to rehabilitate elderly, disabled, and low-

[35] Information on SNMCAC and on programs run is all available from their website: www.snmcac.org.

income homes. Funding is provided by the State of New Mexico-HSD/Income Support Division.

Head Start

Head Start is a federal program for preschool children from low-income families. Children who attend Head Start participate in a variety of educational activities. They also receive medical and dental care, have healthy meals and snacks, and enjoy playing indoors and outdoors in a safe setting. SNMCAC currently operates Head Start Centers in Eddy and Chaves Counties. The social services component of Head Start represents an organized method of assisting families to assess their needs, and then providing those services that will build upon the individual's and family's strengths to meet their own needs. Some of the activities that the social services staff uses to assist families to meet their needs are: community outreach, referrals, and family need assessments, providing information about available community resources and how to obtain and use them, recruitment and enrollment of children, and emergency assistance and/or crisis intervention. Funding is provided by: US Department of Health and Human Services. Table 1 provides a a report on the number of centers and the number of children in the various Head Start programs.

Table 1: Head Start Center and Participation, FY 03-04

Location	Number of Centers	Number of Children
Artesia	1	202
Carlsbad	1	205
Dexter	1	NA
Hagerman	1	NA
Lake Arthur	1	NA
Roswell	3	333
Loving *	1	32

*Loving Municipal schools operates this center for SNMCAC through a Delegate agency.

Home Education Livelihood Program (HELP)

HELP - New Mexico, Inc or HELP-NM was created and incorporated as Home Education Livelihood Program, Inc. in 1965 by the interdenominational New Mexico Council of Churches and its successor, the New Mexico Conference of Churches and Church Women United.[36] The organization is governed by 18-person Board of Directors representing public, business, low income, Native American, parents, and other community members and is committed to full employment, minimal poverty and crime, and family self-sufficiency. HELP-NM wants to see systems and services for

[36] The following information is from www.helpnm.com.

children and families that are aligned and integrated, with a capacity to address effectively community problems like teen pregnancy, high school dropout issues, and drug use.

There are two HELP facilities in Southeast New Mexico:

Carlsbad
509 W. Mermond, Ste D
Carlsbad, NM 88220
(505) 628-8336

Hobbs
726 E. Michigan, Ste 117
Hobbs, NM 88240
(505) 391-7497

United Way

United Way in Carlsbad and Artesia provides funding to organizations based on an application process.[37] Criteria include the number of programs these organizations run, initial investment in organization. To be eligible for funding, organizations must be 5012-c3 non-profit-organizations.

The following organizations are funded by United Way: American Red Cross, Boys and Girls Club of Carlsbad, Better Family Shelter of Carlsbad, Boys Scouts of America, Eddy County Casa, Carlsbad Aware Program, Carlsbad Community Kitchen, Carlsbad Literacy Program, Child Development Center, Kids Safe House of Eddy County, Rainbow Recycling Center

In Lea County, the following organizations are funded by **United Way:** Boys and Girls Club of America, American Red Cross, Boys and Girls Scouts of America, MANNA Outreach (Homeless Shelter), Family Center of Lea County, Family Focus Inc., Lea County Prenatal Program, Hobbs Senior Citizen Center, McKibben Senior Citizen Center (Lovington), Faith in Action, Opportunity House, Action Inc., CASA of Lea County (Lovington), Child and Family Services, Washington Heights Nursery, Salvation Army, and USO (military support organization).

Lea County 2-11 is part of a nationwide United Way program to provide social welfare assistance information by dialing 211.[38] Coverage is on 250 organizations in Lea and the service is offered on weekdays 8am to 5pm. About 300 inquiries are made each month, or 2,749 in the most recent year. 250 organizations serving Lea County about 300 calls a month 2749 calls a year. This service is available M-F.

---

[37] United Way,(505) 887-3504

[38] Alicia Pryer, Program Coordinator-Health and Human Services, 505-393-8203.

Issues that may be addressed are the following: Housing, Addiction and Alcoholism, Youth Programs, Abuse Neglect, Seminar's Workshop, Developmentally Disabled, Meals on Wheels, Senior Citizen Activities, Health and Human Services- support groups, transportation, homeless shelters, volunteerism, healthcare, and food stamps. There are no eligibility requirements for assistance.

EDDY COUNTY

The **Senior Citizens Program** operates within Eddy County. Services provided include: transportation, congregate meals and home delivered meals. These services are provided with federal and state funding. Local funding is sought to meet program-funding requirements. In addition, donations are encouraged from participants in order to insure services are continued and/or expanded. The program serves persons 60 and over. Funding is provided from the Aging and Long Term Services Department, Non-Metro Area Agency on Aging, a $10,000 grant from Altria Senior Helpings., $5,000 from R.D. Hubbard and Joan Dale Hubbard Foundation and $20,000 from Eddy County.

Programs within the City of Carlsbad

The City of Carlsbad Community Development Department is responsible for a variety of grants including legislative and the Small Cities Community Development Block Grant (CDBG).[39] The City applies annually to the New Mexico Department of Finance and Administration - Local Government Division for funding assistance. Eligible activities for funding assistance are community infrastructure, housing, public service capital outlay, economic development, emergency need and Colonias.

The Community Development Department overseas a variety of cultural and recreational departments, including the Carlsbad Municipal Library, the Museum of Fine Arts, the Carlsbad Municipal Transit System (covered under transportation but an important social service, the Retired Senior and Volunteer Program (RSVP), the North Mesa Senior Recreation Center, the San Jose Senior Center, the Riverwalk Family Recreation Center, and the Walter Gerrells Performing Arts and Exhibition Centre

Senior Programs. The **Retired Senior and Volunteer Program (RSVP)** assesses community needs and recruits Carlsbad adults 55 years and over to fill these needs, thus providing provide an outlet for the retired worker to maintain active productive lives through volunteer work. The RSVP Center is open weekdays 8:00 a.m. to 5:00 p.m. (Phone: (505) 887-0871)

The **North Mesa Senior Recreation Center** is located at 1112 N. Mesa in Carlsbad, New Mexico.

---

[39] Interview with John Beasley, Director and website: http://www.cityofcarlsbadnm.com/community_development

The **San Jose Senior Center** provides meals and services for seniors and offers a variety of activities: information and referrals, assistance with income tax preparation, transportation for shopping and paying bills, activities such as arts and crafts, bingo, pool, aerobics, Spanish classes, field trips to educational locations and blood pressure screenings. (Phone: (505) 885-1402)

Carlsbad Child Care Services[40]**.** New Mexico Kids organization supports networking, information and resource awareness and access, and technical assistance for child care professionals, parents and health educators. Currently, Carlsbad has eighteen facilities served by licensed child care centers and private homes. Child Care services are provided by private and religious organizations and under federally funded programs. Happiness Christian Day Care has met its maximum capacity of 129 for its facilities and there are no current plans for expansion. Saint Edwards Catholic School has a capacity of 150 children but only 40 are currently enrolled. However, there are plans for expansion by adding a toddler program.

Programs Within the City of Artesia

Senior programs. The **Artesia Senior Center** is the only senior center in Artesia.[41] 505-748-1207. A schedule of activities appears each week in the Artesia Daily Press with programs such bingo, educational programs, bingo, etc. (505-748-1207) In addition, Artesia does have a program called **Senior Nutrition Meal Site**, which is a weekly schedule of menus and activities in the *Artesia Daily Press.*

Child Care Services. Artesia has seven registered child care centers and homes under www.newmexicokids.org listing.[42] The Artesia Head Start Center under the NM Community Action Corporation has a total of 210 children enrolled. In particular, Great Expectations Day Care center at (505) 748-1065 meets its capacity of 75-80 children and there are no current plans for expansion. Likewise, Lil' Dogs Child Care Center at (505) 746-6143 also has 70 children enrolled with no expansion plans. In general, child care centers in Artesia have no plans for expansion and meet maximum capacity.

Mental Health Care.[43] **Artesia Health Resources** offers individual and family therapy; parenting education and can be reached at (505) 746-9848 and has a 24-Hour Crisis Line at (505) 365-7606. In addition, **Artesia Family Services** is a division of Carlsbad Mental Health Association and provides individualized children case-management. ((505) 746-0924). The **Christian Professional Counseling Services** provides individual and family counseling and offers a mix of mental health and substance abuse services ((505) 622-7216.)[44]

---

[40] Material in this section is based on telephone interviews with daycare providers and with information available on the New Mexico Kids website (www.newmexicokids.org).
[41] http://www.artesianews.com/city.htm
[42] www.newmexicokids.org
[43] http://www.artesianews.com/city.htm
[44] (pms-healthierstate.org/ourservices.html

Domestic Violence Services. (http://www.artesianews.com/city.htm)
There are two domestic violence services, the **Artesia Domestic Violence Shelter,** or **Grandma's House,** can be reached at (505) 748-1198 and with a 24-Hour Crisis Line at (505) 365-5144 and the **Eddy County Family Crisis Center,** which can be reached at (505) 746-3371 with a 24-Hour Crisis Line at (800) 439-7303. Both centers are a battered family shelter providing intervention services, counseling and referral. [45]

LEA COUNTY

Programs within the City of Lovington

Senior Services. The **Senior Citizen Center** provides service to the elderly by helping them to maintain an independent way of life.[46] Services include delivered meals five days. The center works with local doctors and home health care providers to reach the frail & elderly persons. The center provides information and assistance in matters of social security, SSI, food stamps, taxes insurance, legal aid and other available programs. The center also provides congregate meals three days a week, adult education classes and a variety recreational and entertainment actvities

Childcare Services. Currently, Lovington has five registered child care centers, Little Steps Early Learning Academy, Jackson Avenue Baptist Church, In his Hands Christian Day Care Center, Lovington High School, and Noah's Ark Day Care Center.[47] Little Steps Early Learning Academy, Jackson Avenue Baptist Church, Noah's Ark Day Care Center meet their maximum capacity of about forty to fifty children per facility.[48] There are no current plans for expansion, with the exception of Jackson Avenue Baptist Church, which plans add an additional building to hold up to 100 children.

Youth Services. The Lovington Activity Center provides service for all types of functions in a space that now includes a multi-purpose gym facility.[49] The most important function of the center is to encourage active involvement of the youth and help them develop responsibility, self-respect and leadership

United Way of Lea County serves both Hobbs and Lovington. ((505) 397-2203)

Programs within the City of Hobbs

Senior Services. The **Hobbs Senior Center** offers a great variety of programs and services for people 62 years of age and older. The center serves luncheon Monday

---

[45] http://www.artesianews.com/city.htm
[46] The following information is from http://lovington.leaco.net/family.htm.
[47] www.newmexicokids.org
[48] Interviews with providers.
[49] http://lovington.leaco.net/family.htm

through Friday and also provides a Meals-On-Wheels program is available for homebound elderly citizens of Hobbs and surrounding Lea County. In addition, the center provides transportation for its members to area senior citizens activities, doctor appointments and grocery shopping.[50]

Child Care Centers. Currently, Hobbs is the home to twenty registered child care centers.[51] Bernice Coffield Early Head Start, Mother Goose Pre-School, The Jungle Book, and Washington Heights Nursery Inc., are the largest facilities, with over 100 kids. There are no current plans for expansion for child care centers, with the exception of The Jungle Book, which is adding an additional room to accommodate new child-care programs.[52]

Mental Health Services. The **Guidance Center of Lea County** provides a mix of mental health and substance abuse services, including substance abuse treatment on an outpatient base.[53] Special programs are offered for Adolescents, Persons with co-occurring mental and substance abuse disorders, Women, DUI/DWI offenders, Criminal justice clients. ((505) 393-3168)

Other Social Welfare organizations available in Hobbs but not listed above include the American Red Cross ((505) 393-7516), Faith in Action Incorporated ((505) 393-7374), Family Center-Parent Anonymous ((505) 393-1776), Leaders ((505) 393-8201), Habitat for Humanity ((505) 397-4398), and the Salvation Army ((505) 397-2119).

[50] http://www.hobbsnm.org/senior.html.
[51] www.newmexicokids.org
[52] interviews with providers
[53] http://therapistunlimited.com/rehabs

Part 4

Local Government Funds and Expenditures

LOCAL GOVERNMENT TAXES AND OTHER REVENUE SOURCES

NEW MEXICO

Local government authority to tax is limited except for that authority specifically provided by statute. The two major local government revenue sources are the property tax and the gross receipt tax.

Property Taxes. Figure 1 introduces some key concepts relevant to understanding the New Mexico property tax and the tables which follow. Properties are valued at current and correct, except centrally assessed properties, like utilities. The assessment ratio is 1/3, which means that the net taxable value is one third of the assessed value minus allowable exemptions. The mil rates are the dollars in taxes owed per dollar of net taxable value. The maximum operating levy that may be imposed by a county is 11.85 mils, while the maximum for a municipality is 7.65 mils. The state, counties and municipalities and school districts are allowed to go into debt and to sell General Obligation (GO) Bonds, with principal and interest payable from a debt service levy, but only after the specific bond purposes that have been approved by the voters. The State Constitution places strict limits on GO bonding capacity for each type of jurisdiction. (See footnote at the bottom of Figure 1.)

Tables 1a,b and c present figures for tax year 2006 on the three New Mexico counties that are within 50 miles of the proposed ELEA site for GNEP. For each jurisdiction, the table presents figures on residential and non-residential net taxable value as well as on the value of oil and gas production and equipment, using the methodology for each laid out in statute. It then presents the applicable mil levies and a calculation of the "obligations", that is the revenues that would be collected by the jurisdiction in question assuming 100% collection on net taxable value. For many Eddy and particularly Lea county jurisdictions, the ad valorem levy on oil and gas production and equipment accounts for a substantial proportion of total obligations.

Table 2 examines the sources of growth in county and municipality property tax revenues within the three ELEA counties between tax year 2002 and tax year 2006. The increase in oil and gas activity over the period made a major contribution to revenue growth in all three counties and in Carlsbad, Hobbs, Eunice and Jal.

Figure 1: Property Tax Terminology and Relationships

New Mexico Taxation & Revenue Department
2006 Property Tax Facts

Figure 1: Essential Relationships

Net Taxable Value *x* **Rate** = **Obligations** — *$1.140 Billion*
$42.828 Billion *$26.62/$1,000** — **Number of People** — *1.93 Million*
= **Obligations Per Capita** — *$590.67*

* *statewide average*

Market Value -- Existing Properties and New Construction
- Appreciation
± Appraisal Error
Assessed Value*
÷ 3 *$125.34 Billion*
Taxable Value *$41.781 Billion*
- Head of Family & Veterans Exemptions ** *$1.047 Billion*

Net Taxable Value *x* **Rate** = **Obligations** — *$1.140 Billion*
$42.828 Billion *$26.62 /$1,000** — **Number of People** — *1.93 Million*
= **Obligations Per Capita** — *$590.67*

*subject to recently enacted limits on increases in assessed value of residential properties.

Rate Determinants:
***Statutory Maximums -- Operating and Debt-Service**
Yield Control on Operating Rates
Voter Impositions -- Non-Operating, Primarily Debt Rates
Operating Rate Impositions -- City Councils, County Commissions, etc.

*The New Mexico Constitution limits rates that have not been approved by voters to 20 mills. Statutes distribute the 20-mill authority as follows: municipalities may impose up to 7.65 mills; counties may impose a maximum of 11.85 mills, while school districts may impose a maximum of .5 mills for operating purposes. The State of New Mexico may impose debt obligations funded by property taxes, when approved by voters, totaling no more than 1 percent of statewide net taxable value. Municipalities and counties may generally impose debt totaling no more than 4 percent of assessed value when approved by voters, while school districts are limited to debt totaling 6 percent of net taxable value within their jurisdictions. Although a number of counties, municipalities and virtually all of the state's school districts are imposing their maximum operating rates, few jurisdictions have imposed the maximum debt levies.

**Includes recently-enacted veterans disability waivers.

Figures above do not reflect approximately $4 billion in exempt property (typically owned by non-profit institutions) reported by county assessors that is not taxable.

Reproduced from New Mexico Taxation and Revenue Department, *Tax Facts, 2006*

Table 1a: Property Taxes Chaves County: Net Taxable Value, Mil Levies, Obligations, Tax Year 2006

	Residential	Non Residential	Oil & Gas	Total
CHAVES COUNTY				
Net Taxable Value (000s)	521,180	671,753	119,707	1,312,640
Mil Rates				1,312,640
Operating	6.989	10.350	10.350	
Debt Service				
Revenues if 100%				
Operating	3,642,526	6,952,648	1,238,965	11,834,139
Debt Service				
DEXTER				
Net Taxable Value ($000s)	4,369	1,691		6,061
Mil Rates				
Operating	1.268	2.225		
Debt Service				
Revenues if 100%				
Operating	5,540	3,763		9,304
Debt Service				
HAGERMAN				
Net Taxable Value ($000s)	2,692	880		3,573
Mil Rates				
Operating	1.849	2.225		
Debt Service				
Revenues if 100%				
Operating	4,978	1,958		6,937
Debt Service				
LAKE ARTRUR				
Net Taxable Value ($000s)	710	401		1,112
Mil Rates				
Operating	2.225	2.225		
Debt Service				
Revenues if 100%				
Operating	1,580	893		2,473
Debt Service				
ROSWELL				
Net Taxable Value ($000s)	282,577	160,184		442,761
Mil Rates				
Operating	7.351	7.650		
Debt Service	0.670	0.670		
Revenues if 100%				
Operating	2,077,226	1,225,405		3,302,631
Debt Service	189,327	107,323		296,650
UNINCORPORATED AREAS				
Net Taxable Value ($000s)	230,830	508,596	119,707	859,131
Dexter School District	9,565	36,573	3,252	49,390
Hagerman School District	3,162	16,073	2,643	21,878
Lake Arthur School District	1,041	10,276	8,990	20,307
Roswell School District	67,225	110,310	104,344	281,879
Outside Districts 14,27/28	1,582	9,428	477	11,487
Outside District 1	26	23		48
CHAVES SWCD				
Net Taxable Value ($000s)	79,951	162,956	-	242,907
Mil Rates	0.854	1.000		
Revenues if 100%	68,278	162,956		231,234

	Residential	Non Residential	Oil & Gas	Total
CHAVES COUNTY SCHOOL DISTRICTS				
DEXTER SCHOOL DISTRICT				
Net Taxable Value ($000s)	13,934	38,265	3,252	55,451
Mil Rates				
Operational	0.226	0.479	0.479	
Debt Service	8.632	8.632	8.632	8.632
Cap Improvement	2.000	2.000	2.000	2.000
School District Ed. Tech. D	1.137	1.137	1.137	1.137
Revenues if 100%				
Operational	3,149	18,329	1,558	23,036
Debt Service	120,277	330,301	28,071	478,649
Cap Improvement	27,868	76,529	6,504	110,901
School District Ed. Tech. D	15,843	43,507	3,697	63,047
HAGERMAN SCHOOL DISTRICT				
Net Taxable Value ($000s)	5,854	16,953	2,643	25,451
Mil Rates				
Operational	0.328	0.5	0.5	
Debt Service	6.536	6.536	6.536	6.536
Cap Improvement	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	1,920	8,476	1,322	11,718
Debt Service	38,263	110,804	17,277	166,344
Cap Improvement	11,708	33,906	5,267	50,901
LAKE ARTHUR SCHOOL DISTRICT				
Net Taxable Value ($000s)	1,752	10,678	8,990	21,419
Mil Rates				
Operational	0.380	0.500	0.500	
Debt Service	4.615	4.615	4.615	4.615
Cap Improvement	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	666	5,339	4,495	10,499
Debt Service	8,084	49,277	41,488	98,849
Cap Improvement	3,503	21,355	17,979	42,838
ROSWELL SCHOOL DISTRICT				
Net Taxable Value ($000s)	349,802	270,494	104,344	724,640
Mil Rates				
Operational	0.290	0.500	0.500	
Debt Service	5.098	5.098	5.098	5.098
Cap Improvement	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	101,443	135,247	52,172	288,862
Debt Service	1,783,292	1,378,977	531,947	3,694,215
Cap Improvement	699,604	540,987	208,688	1,449,280
ENMU ROSWELL				
Net Taxable Value ($000s)	519,572	662,303	119,229	1,301,105
Mil Rates				
Operating	0.941	1.000	1.000	
Debt Service	1.371	1.371	1.371	
Revenues if 100%				
Operating	488,918	662,303	119,229	1,270,450
Debt Service	712,334	908,017	163,463	1,783,814
NM JUNIOR COLLEGE				
Net Taxable Value ($000s)	26	23		48
Mil Rates	4.470	5.000		
Revenues if 100%	114	113	-	228

NM Dept of Finance and Administration, Local Government Division, Certificate of Tax Rates, Tax Year 2006

Table 1b: Property Taxes Eddy County: Net Taxable Value, Mil Levies, Obligations, Tax Year 2006

	Residential	Non Residential	Oil & Gas	Total
EDDY COUNTY				
Net Taxable Value (000s)	333,133	565,660	1,677,482	2,576,274
Mil Rates				2,576,274
Operating	6.623	7.500	7.500	
Debt Service				
Revenues if 100%				
Operating	2,206,338	4,242,448	12,581,111	19,029,897
Debt Service				
ARTESIA				
Net Taxable Value ($000s)	67,274	110,870	334	178,478
Mil Rates				
Operating	1.888	2.225	2.225	
Debt Service				
Revenues if 100%				
Operating	127,013	246,686	743	374,443
Debt Service				
CARLSBAD				
Net Taxable Value ($000s)	167,274	93,679	17,053	278,006
Mil Rates				
Operating	6.225	6.225	6.225	6.225
Debt Service				
Revenues if 100%				
Operating	1,041,283	583,152	106,154	1,730,588
Debt Service				
HOPE				
Net Taxable Value ($000s)	320	358		678
Mil Rates				
Operating	5.503	7.650		
Debt Service				
Revenues if 100%				
Operating	1,761	2,742		4,503
Debt Service				
LOVING				
Net Taxable Value ($000s)	3,119	1,374		4,493
Mil Rates				
Operating	1.842	2.059		
Debt Service				
Revenues if 100%				
Operating	5,745	2,829		8,574
Debt Service				
UNINCORPORATED AREAS				
Net Taxable Value ($000s)	95,145	359,378	1,660,095	2,114,618
Carlsbad School District	57,569	219,943	885,165	1,162,677
Hope School District	34,980	124,294	665,066	824,340
Loving School District	2,596	15,142	109,863	127,601
	95,145	359,378	1,660,095	2,114,618
ARTESIA GENERAL HOSPITAL (Artesia and Hope School Districts)				
Mil Rates				
Operating	3.000	3.000	3.000	3.000
Debt Service	2.650	2.650	2.650	2.650
Revenues if 100%				
Operating	307,722	706,567	1,996,199	3,010,489
Debt Service	271,821	624,135	1,763,309	2,659,265

	Residential	Non Residential	Oil & Gas	Total
EDDY COUNTY SCHOOL DISTRICTS				
ARTESIA SCHOOL DISTRICT				
Net Taxable Value ($000s)	67,274	110,870	334	178,478
Mil Rates				
Operational	0.432	0.500	0.500	
Debt Service	0.585	0.585	0.585	0.585
Cap Improvement	2.000	2.000	2.000	2.000
HB 33 School Bldgs	4.415	4.415	4.415	4.415
Revenues if 100%				
Operational	29,062	55,435	167	84,664
Debt Service	39,355	64,859	195	104,410
Cap Improvement	134,548	221,740	668	356,956
HB 33 School Bldgs	297,015	489,491	1,475	787,981
CARLSBAD SCHOOL DISTRICT				
Net Taxable Value ($000s)	224,843	313,622	902,218	1,440,683
Mil Rates				
Operational	0.427	0.500	0.500	
Debt Service	1.309	1.309	1.309	1.309
Cap Improvement	2.000	2.000	2.000	2.000
HB 33 School Bldgs	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	96,008	156,811	451,109	703,928
Debt Service	294,320	410,531	1,181,004	1,885,855
Cap Improvement	449,687	627,243	1,804,437	2,881,367
HB 33 School Bldgs	449,687	627,243	1,804,437	2,881,367
HOPE SCHOOL DISTRICT				
Net Taxable Value ($000s)	35,300	124,652	665,066	825,018
Mil Rates				
Operational	0.432	0.500	0.500	
Debt Service	0.585	0.585	0.585	0.585
Cap Improvement	2.000	2.000	2.000	2.000
HB 33 School Bldgs	4.415	4.415	4.415	4.415
Revenues if 100%				
Operational	15,250	62,326	332,533	410,109
Debt Service	20,651	72,922	389,063	482,636
Cap Improvement	70,600	249,305	1,330,131	1,650,036
HB 33 School Bldgs	155,850	550,340	2,936,265	3,642,455
LOVING SCHOOL DISTRICT				
Net Taxable Value ($000s)	98,264	360,752	1,660,095	2,119,111
Mil Rates				
Operational	0.432	0.500	0.500	
Debt Service	1.996	1.996	1.996	1.996
Cap Improvement	2.000	2.000	2.000	2.000
School Dist Ed. Tech. Debt	1.087	1.087	1.087	1.087
Revenues if 100%				
Operational	42,450	180,376	830,047	1,052,874
Debt Service	196,136	720,062	3,313,549	4,229,746
Cap Improvement	196,529	721,505	3,320,189	4,238,222
HB 33 School Bldgs	106,813	392,138	1,804,523	2,303,474
NMSU CARLSBAD BRANCH				
Mil Rate	0.903	1.000	1.000	
Revenues if 100%	203,034	313,622	902,218	1,418,874

NM Dept of Finance and Administration, Local Government Division, Certificate of Tax Rates, Tax Year 2006

Table 1c: Property Taxes Lea County: Net Taxable Value, Mil Levies, Obligations, Tax Year 2006

	Residential	Non Residential	Oil & Gas	Total
LEA COUNTY				
Net Taxable Value (000s)	261,454	390,641	1,862,717	2,514,811
Mil Rates				
Operating	8.785	10.600	10.600	
Debt Service				
Revenues if 100%				
Operating	2,296,872	4,140,792	19,744,796	26,182,460
Debt Service				
EUNICE				
Net Taxable Value ($000s)	7,710	3,269	11,892	22,871
Mil Rates				
Operating	7.317	7.241	7.650	
Revenues if 100%				
Operating	56,412	23,673	90,978	171,062
HOBBS				
Net Taxable Value ($000s)	141,308	116,517	56,339	314,164
Mil Rates				
Operating	4.996	5.555	5.555	
Revenues if 100%				
Operating	705,974	647,254	312,963	1,666,191
JAL				
Net Taxable Value ($000s)	5,727	2,488	1,091	9,306
Mil Rates				
Operating	7.145	7.650	7.650	
Revenues if 100%				
Operating	40,918	19,035	8,345	68,298
LOVINGTON				-
Net Taxable Value ($000s)	33,270	13,302		46,572
Mil Rates				
Operating	4.974	5.650		
Revenues if 100%				
Operating	165,487	75,154		240,642
TATUM				-
Net Taxable Value ($000s)	2,085	1,084		3,169
Mil Rates				
Operating	3.779	4.225		
Revenues if 100%				
Operating	7,881	4,580		12,460
UNINCORPORATED AREAS				
Net Taxable Value ($000s)	71,354	253,980	1,793,394	2,118,728
Eunice School District	1,513	36,246	551,851	589,611
Hobbs School District	47,859	96,811	437,099	581,768
Jal School District	665	23,431	189,134	213,231
Lovington School District	18,107	70,627	486,749	575,483
Tatum School District	3,210	26,865	128560.95	158,636
NOR-LEA HOSPITAL DISTRICT (Lovington School District, Tatum School District)				
Mil Rates	4.000	4.000	4.000	
Revenues if 100%				
NOR-Lea Hospital Dist.	226,688	447,510	2,461,241	3,135,439
EUNICE HOSPITAL DISTRICT (Eunice only)				
Mil Rates				
Eunice Hospital District	2.000	2.000	2.000	2.000
Eunice Hospital Dist. Debt	0.348	0.348	0.348	0.348
Revenues if 100%				
Eunice Hospital District	18,446	79,031	1,127,488	1,224,965
Eunice Hospital Dist. Debt	3,210	13,751	196,183	213,144
JAL HOSPITAL (Jal School District)				
Mil Rates	2.500	2.500	2.500	
Revenues if 100%				
Jal Hospital	15,981	64,798	475,562	556,341

	Residential	Non Residential	Oil & Gas	Total
LEA COUNTY SCHOOL DISTRICTS				
EUNICE SCHOOL DISTRICT				
Net Taxable Value ($000s)	9,223	39,516	563,744	612,482
Mil Rates				
Operational	0.335	0.500	0.500	
Cap Improvement	2.000	2.000	2.000	2.000
HB 33 School Bldgs	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	3,090	19,758	281,872	304,719
Cap Improvement	18,446	79,031	1,127,488	1,224,965
HB 33 School Bldgs	18,446	79,031	1,127,488	1,224,965
HOBBS SCHOOL DISTRICT				
Net Taxable Value ($000s)	189,167	213,328	493,438	895,932
Mil Rates				
Operational	0.310	0.500	0.500	
Debt Service	1.725	1.725	1.725	1.725
Cap Improvement	1.965	2.000	2.000	
HB 33 School Bldgs	3.929	4.000	4.000	
Revenues if 100%				
Operational	58,642	106,664	246,719	412,025
Debt Service	326,312	367,991	851,180	1,545,483
Cap Improvement	371,712	426,657	986,875	1,785,244
HB 33 School Bldgs	743,236	853,313	1,973,750	3,570,299
JAL SCHOOL DISTRICT				
Net Taxable Value ($000s)	6,392	25,919	190,225	222,537
Mil Rates				
Operational	0.437	0.500	0.500	
Cap Improvement	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	2,793	12,960	95,112	110,866
Cap Improvement	12,784	51,839	380,450	445,073
LOVINGTON SCHOOL DISTRICT				
Net Taxable Value ($000s)	51,377	83,929	486,749	622,055
Mil Rates				
Operational	0.301	0.470	0.470	
Debt Service	2.022	2.022	2.022	2.022
Cap Improvement	1.948	1.880	1.880	
HB 33 School Bldgs	2.000	2.000	2.000	2.000
Revenues if 100%				
Operational	15,464	39,446	228,772	283,683
Debt Service	103,884	169,704	984,207	1,257,795
Cap Improvement	100,082	157,786	915,089	1,172,957
HB 33 School Bldgs	102,754	167,857	973,499	1,244,110
TATUM SCHOOL DISTRICT				
Net Taxable Value ($000s)	5,295	27,949	128,561	161,805
Mil Rates				
Operational	0.254	0.498	0.498	
Debt Service	2.626	2.626	2.626	2.626
Cap Improvement	1.736	1.993	1.993	
Revenues if 100%				
Operational	1,345	13,919	64,023	79,287
Debt Service	13,905	73,394	337,601	424,900
Cap Improvement	9,192	55,702	256,222	321,116
NEW MEXICO JUNIOR COLLEGE				
Net Taxable Value ($000s)	261,454	390,641	1,862,717	2,514,811
Mil Rates				
Operating	4.385	5.000	5.000	
Revenues if 100%				
Operating	1,146,475	1,953,204	9,313,583	12,413,262

Source of Data: Local Government Division, Certificate of Tax Rates, Lea County, 2006

Table 2: Growth in Property Taxes Between Tax Year 2002 and Tax Year 2006

	Residential		Compound Annual % Change	Non-Residential		Compound Annual % Change	Oil & Gas		Compound Annual % Change	Total Net Taxable Value		Compound Annual % Change
	2002	2006	02-06	2002	2006	02-06	2002	2006	02-06	2002	2006	02-06
LEA COUNTY												
NTV ($000)	219,482	261,454	4.5%	326,935	390,641	4.6%	1,064,105	1,862,717	15.0%	1,610,523	2,514,811	11.8%
County Rate	6.679	8.785	7.1%	8.600	10.600	5.4%	8.600	10.600	5.4%			
Obligations	1,465,923	2,296,872	11.9%	2,811,639	4,140,792	10.2%	9,151,307	19,744,796	21.2%	13,428,869	26,182,460	18.2%
Eunice												
NTV ($000)	6,853	7,710	3.0%	2,724	3,269	4.7%	5,161	11,892	23.2%	14,739	22,871	11.6%
MuniRate	6.818	7.317	1.8%	7.650	7.241	-1.4%	7.650	7.650	0.0%			
Obligations	46,725	56,412	4.8%	20,840	23,673	3.2%	39,485	90,978	23.2%	107,050	171,062	12.4%
Hobbs												
NTV ($000)	119,784	141,308	4.2%	95,167	116,517	5.2%	20,894	56,339	28.1%	235,846	314,164	7.4%
MuniRate	4.949	4.996	0.2%	4.894	5.555	3.2%	4.894	5.555	3.2%			
Obligations	592,813	705,974	4.5%	465,746	647,254	8.6%	102,257	312,963	32.3%	1,160,817	1,666,191	9.5%
Jal												
NTV ($000)	5,428	5,727	1.3%	2,184	2,488	3.3%	661	1,091	13.3%	8,273	9,306	3.0%
MuniRate	6.585	7.145	2.1%	7.650	7.650	0.0%	7.650	7.650	0.0%			
Obligations	35,742	40,918	3.4%	16,705	19,035	3.3%	5,060	8,345	13.3%	57,508	68,298	4.4%
Lovington												
NTV ($000)	29,083	33,270	3.4%	10,610	13,302	5.8%				39,693	46,572	4.1%
MuniRate	6.679	4.974	-7.1%	8.600	5.650	-10.0%						
Obligations	194,243	165,487	-3.9%	91,248	75,154	-4.7%				285,491	240,642	-4.2%
Tatum												
NTV ($000)	1,889	2,085	2.5%	1,524	1,084	-8.2%				3,414	3,169	-1.8%
MuniRate	3.526	3.779	1.7%	4.203	4.225	0.1%						
Obligations	6,662	7,881	4.3%	6,406	4,580	-8.0%				13,068	12,460	-1.2%
EDDY COUNTY												
NTV ($000)	262,715	333,133	4.2%	409,336	565,660	8.4%	1,045,411	1,677,482	12.5%	1,737,463	2,576,274	10.3%
County Rate	6.285	6.623	1.3%	7.500	7.500	0.0%	7.500	7.500	0.0%			
Obligations	1,776,866	2,206,338	5.6%	3,070,023	4,242,448	8.4%	7,840,585	12,581,111	12.5%	12,687,474	19,029,897	10.7%
Artesia												
NTV ($000)	52,937	67,274	6.2%	55,890	110,870	18.7%	175	334	17.6%	109,001	178,478	13.1%
MuniRate	1.936	1.888	-0.6%	2.225	2.225	0.0%	2.225	2.225	0.0%			
Obligations	102,486	127,013	5.5%	124,355	246,686	18.7%	388	743	17.6%	227,229	374,443	13.3%
Carlsbad												
NTV ($000)	146,687	167,274	3.3%	85,529	93,679	2.3%	3,180	17,053	52.2%	235,396	278,006	4.2%
MuniRate	5.959	6.225	0.011	6.225	6.225	-	6.225	6.225	-			
Obligations	874,107	1,041,283	4.5%	532,415	583,152	2.3%	19,798	106,154	52.2%	1,426,319	1,730,588	5.0%
Hope												
NTV ($000)	349	320	-2.1%	304	358	4.2%				653	678	1.0%
MuniRate	4.036	5.503	8.1%	7.650	7.650	0.0%						
Obligations	1,407	1,761	5.8%	2,327	2,742	4.2%				3,735	4,503	4.8%
Loving												
NTV ($000)	2,881	3,119	2.0%	1,229	1,374	2.8%				4,110	4,493	2.2%
MuniRate	1.576	1.842	4.0%	2.225	2.059	-1.9%						
Obligations	4,541	5,745	6.1%	2,734	2,829	0.9%				7,275	8,574	4.2%
CHAVES COUNTY												
NTV ($000)	316,699	521,180	13.3%	261,669	671,753	26.6%	85,487	1,312,640	98.0%	663,854	1,312,640	18.6%
County Rate	7.338	6.989	-1.2%	10.919	10.350	-1.3%	10.919	10.350	-1.3%			
Obligations	2,323,936	3,642,526	11.9%	2,857,161	6,952,648	24.9%	933,427	11,834,139	88.7%	6,114,525	11,834,139	17.9%
Dexter												
NTV ($000)	3,394	4,369	6.5%	1,331	1,691	6.2%				4,724	6,061	6.4%
MuniRate	1.256	1.268	0.2%	2.225	2.225	0.0%						
Obligations	4,262	5,540	6.8%	2,961	3,763	6.2%				7,223	9,304	6.5%
Hagerman												
NTV ($000)	2,424	2,692	2.7%	713	880	5.4%				3,137	3,573	3.3%
MuniRate	1.741	1.849	1.5%	2.225	2.225	0.0%						
Obligations	4,221	4,978	4.2%	1,586	1,958	5.4%				5,807	6,937	4.5%
Lake Arthur												
NTV ($000)	660	710	1.8%	396	401	0.3%				1,056	1,112	1.3%
MuniRate	2.080	2.225	1.7%	2.225	2.225	0.0%						
Obligations	1,373	1,580	3.6%	882	893	0.3%				2,255	2,473	2.3%
Roswell												
NTV ($000)	245,161	282,577	3.6%	124,408	160,184	6.5%				369,569	442,761	4.6%
MuniRate - Total	9.500	8.021	-4.1%	10.066	8.320	-4.7%						
Operational	7.084	7.351	0.9%	7.650	7.650	0.0%						
Debt Service	2.416	0.670	-27.4%	2.416	0.670	-27.4%						
Obligations	1,736,721	2,077,226	4.6%	951,721	1,225,405	6.5%				2,688,442	3,302,631	5.3%
Debt Service	592,309	189,327	-24.8%	300,570	107,323	-22.7%				892,879	296,650	-24.1%

Source: NM Local Government Division, Property Tax Certificates for Lea, Eddy and Chaves Counties, 2002 and 2006

Gross Receipts Tax. The gross receipts tax is imposed on the seller for the privilege of doing business in New Mexico and is an extremely broad-based tax. According to the New Mexico Taxation and Revenue Department,

> The tax is imposed on the gross receipts of persons who:
> 1. Sell property in New Mexico. Property includes real property, tangible personal property, including electricity and manufactured homes, and certain intangible property, such as licenses and franchises.
> 2. Perform services in New Mexico. Service includes construction activities and all construction materials that will become part of the construction project.
> 3. Lease property employed in New Mexico.
> 4. Sell research and development services performed outside New Mexico when the product of the service is initially used in New Mexico.[54]

The gross receipts tax is applied to total gross receipts net of certain exemptions and deductions that are spelled out in statute – to taxable gross receipts. Generally, the gross receipts tax rate is the applicable rate at the place of business, although construction activity is taxed at the construction site. The total rate is the sum of the State tax, now 5%, the County tax – and here it makes a difference whether the business is located within or outside an incorporated municipality within the county, and the municipal tax, unless in an unincorporated area.

The gross receipts tax provides over two-thirds of New Mexico municipality general fund revenues and is of growing importance to county governments. Municipalities have the authority to impose up to 1.25 cents in quarter and eighth cent increments for a municipal gross receipts tax, with an additional quarter cent of authority to impose increments of municipal infrastructure tax. They also can impose a one eighth cent environmental gross receipts tax. Some of this authority can be exercised by the governing body but is subject to a negative referendum; some may require a positive referendum. Municipalities also all receive a 1.225% distribution of State-shared receipts based on State revenues from activity within the municipality. Counties have more limited general authority to impose a county gross receipts tax and they do not receive a state-shared distribution. However, counties have numerous options to impose taxes for other purposes. Some of these taxes, e.g., fire protection, county environmental gross receipts tax, may only be imposed on residents of the unincorporated area. Some, like that for jails and hospital and health care reflect County responsibilities and are imposed county-wide.

Table 3 indicates the various local option gross receipts taxes that the ELEA counties and municipalities had in place as of January 1, 2007. The first block of columns reports the municipal taxes; the second, the county taxes. The third block of columns reports the State tax and the total tax rate within the distribution. The final block of columns indicate the total local distribution percentages to counties and municipalities based on these taxes.

---

[54] New Mexico Taxation and Revenue Department, *Gross Receipts and Compensating Taxes: An Overview July 1, 2006 - June 30, 2007.*

Table 3: Gross Receipts Tax Rates: Chaves, Eddy and Lea Counties and Incorporated Municipalities

GROSS RECEIPTS TAXES ENACTED, TAXING JURISDICTIONS IN LEA, EDDY & CHAVES COUNTIES, JAN. 1, 2007

	Municipal Gross Receipts	Municipal Infrastruct	Municipal Environ	County Gross Receipts	County Health Care	Local Hospital	Jail	Fire	County Environ	State Gross Receipts	Total Tax Rate	Municipal Local Option a	State Shared Municipal	Total Municipal Distrib	County Local Option b
MAXIMUM AUTHORITY	**1.2500%**	**0.2500%**	**0.0625%**	**0.4375%**	**0.1250%**	**0.5000%**	**0.1250%**	**0.2500%**	**0.1250%**	**5.0000%**		**1.8125%**	**1.2250%**	**3.0375%**	**2.9375%**
CHAVEZ COUNTY															
Unincorporated				0.3750%	0.0625%		0.1250%	0.2500%	0.1250%	5.0000%	5.9375%	0.0000%	0.0000%	0.0000%	0.9375%
Dexter	1.2500%			0.3750%	0.0625%		0.1250%			5.0000%	6.8125%	1.2500%	1.2250%	2.4750%	0.5625%
Hagerman	1.2500%	0.1250%	0.0625%	0.3750%	0.0625%		0.1250%			5.0000%	7.0000%	1.4375%	1.2250%	2.6625%	0.5625%
Lake Arthur	0.7500%			0.3750%	0.0625%		0.1250%			5.0000%	6.3125%	0.7500%	1.2250%	1.9750%	0.5625%
ROSWELL	1.2500%	0.1250%	0.0625%	0.3750%	0.0625%		0.1250%			5.0000%	7.0000%	1.4375%	1.2250%	2.6625%	0.5625%
EDDY COUNTY															
Unincorporated				0.2500%				0.2500%	0.1250%	5.0000%	5.6250%	0.0000%	0.0000%	0.0000%	0.6250%
Artesia	1.2500%	0.2500%	0.0625%	0.2500%						5.0000%	6.8125%	1.5625%	1.2250%	2.7875%	0.2500%
CARLSBAD	1.2500%	0.2500%	0.0625%	0.2500%						5.0000%	6.8125%	1.5625%	1.2250%	2.7875%	0.2500%
Hope	1.2500%			0.2500%						5.0000%	6.5000%	1.2500%	1.2250%	2.4750%	0.2500%
Loving	1.2500%	0.1250%	0.0625%	0.2500%						5.0000%	6.6875%	1.4375%	1.2250%	2.6625%	0.2500%
												0.0000%	1.2250%	1.2250%	0.0000%
LEA COUNTY															
Unincorporated				0.2500%					0.1250%	5.0000%	5.3750%	0.0000%	0.0000%	0.0000%	0.3750%
Eunice	1.2500%	0.1250%	0.0625%	0.2500%						5.0000%	6.6875%	1.4375%	1.2250%	2.6625%	0.2500%
HOBBS	1.2500%	0.1250%	0.0625%	0.2500%						5.0000%	6.6875%	1.4375%	1.2250%	2.6625%	0.2500%
Jal	1.2500%	0.1250%	0.0625%	0.2500%						5.0000%	6.6875%	1.4375%	1.2250%	2.6625%	0.2500%
Lovingom	1.2500%	0.1250%		0.2500%						5.0000%	6.6250%	1.3750%	1.2250%	2.6000%	0.2500%
Indust Park				0.2500%					0.1250%	5.0000%	5.3750%	0.0000%	1.2250%	1.2250%	0.3750%
Tatum	1.2500%	0.1250%	0.0625%	0.2500%						5.0000%	6.6875%	1.4375%	1.2250%	2.6625%	0.2500%
ROOSEVELT COUNTY															
Unincorporated				0.4375%		0.5000%	0.1250%			5.0000%	6.0625%	0.0000%	0.0000%	0.0000%	1.0625%
Causy	0.5000%			0.4375%		0.5000%	0.1250%			5.0000%	6.5625%	0.5000%	1.2250%	1.7250%	1.0625%
Dora	0.7500%			0.4375%		0.5000%	0.1250%			5.0000%	6.8125%	0.7500%	1.2250%	1.9750%	1.0625%
Elida	1.2500%		0.0625%	0.4375%		0.5000%	0.1250%			5.0000%	7.3750%	1.3125%	1.2250%	2.5375%	1.0625%
Floyd	0.5000%			0.4375%		0.5000%	0.1250%			5.0000%	6.5625%	0.5000%	1.2250%	1.7250%	1.0625%
PORTALES	1.2500%	0.2500%	0.0625%	0.4375%		0.5000%	0.1250%			5.0000%	7.6250%	1.5625%	1.2250%	2.7875%	1.0625%

a Maximum authority for municipalities includes 0.25% for municipal capital outlay, which none of the communities in these three counties have imposed.

b Maximum authority for counties includes up to 0.125% County infrastructure. 0.25% County Capital Outlay, up to 0.25% County Communications and Medical Services, 0.5% County Education, and 0.25% County Hospital Emergency.

Source: New Mexico Taxation and Revenue Department, *Enactment Dates of Local Option Taxes – as of January 1, 2007*

Table 4 provides five years of data on gross receipts tax distributions for each of those New Mexico counties and municipalities included in the ELEA economic region. The last two columns present calculated growth rates, compound annual growth between 2002 and 2006 and the growth between 2005 and 2006. The revenue growth is affect both by changes in the local option taxes and by changes in the tax base. Figures on the changing tax base by sector for each of the counties and major municipalities can be found in the chapter dealing with the economy. Suffice it to say that recent strong growth in taxable receipts for a number of these jurisdictions is related to oil and gas activity.

Table 4: Gross Receipts Tax Distributions: Chaves, Eddy and Lea Counties and Incorporated Municipalities, FY 02 to FY 05

	FY02	FY 03	FY 04	FY 05	FY 06	% Annual Growth FY02-06	% Annual Growth FY05-06
CHAVEZ COUNTY							
County Govt	4,538,828	4,491,693	4,467,487	4,362,941	4,558,831	0.1%	4.5%
Dexter	369,493	401,473	438,890	545,133	533,626	9.6%	-2.1%
Hagerman	254,934	208,469	278,428	303,400	254,562	0.0%	-16.1%
Lake Arthur	28,167	29,937	27,744	36,848	28,393	0.2%	-22.9%
ROSWELL	18,221,384	18,893,711	19,712,224	23,100,931	23,751,298	6.9%	2.8%
EDDY COUNTY							
County Govt	5,150,880	4,368,726	5,936,431	7,598,990	7,995,875	11.6%	5.2%
Artesia*	7,400,108	7,251,650	8,109,274	8,789,599	11,450,652	11.5%	30.3%
CARLSBAD	12,032,849	12,786,397	13,390,798	16,495,832	16,436,626	8.1%	-0.3%
Hope	16,593	10,647	7,043	9,102	16,058	-0.8%	76.4%
Loving *	120,894	133,556	258,200	250,922	87,396	-7.8%	-65.2%
LEA COUNTY							
County Govt	3,477,204	3,225,683	3,748,833	5,514,270	6,607,446	17.4%	19.8%
Eunice	1,134,186	1,168,945	1,375,416	1,885,204	2,314,250	19.5%	22.8%
HOBBS	19,905,160	19,235,346	22,252,548	28,751,528	34,154,693	14.5%	18.8%
Jal	656,789	648,589	520,476	688,525	737,064	2.9%	7.0%
Lovington	2,925,999	2,951,055	3,570,609	4,743,855	4,645,842	12.3%	-2.1%
Indust Park							
Tatum*	279,059	279,289	300,446	470,889	411,348	10.2%	-12.6%

NM Dept of Finance, Local Government Division, Financial and Property Tax Data by County and Munipality, various years, and tables available on the Local Government Division, Financial Management Bureau website.

Other Revenue Sources. While the property and gross receipts taxes constitute the major revenue sources for the New Mexico counties and municipalities in the ELEA region, cities and counties also receive a number of distributions from the state that are important to financing general government activities. While not all inclusive, the amounts of the major distributions to each of these local governments in FY 2006 are given in Table 5. Some of these distributions may be used for any lawful purpose. Others, like the municipal street and county road gasoline tax distributions, the fire fund distributions, and the law enforcement protection fund distributions may only be used for certain purposes and must be accounted for in separate special revenue funds. Cigarette taxes are used for recreation programs. While Lea and Eddy counties are not eligible, Chaves County also receives a county equalization distribution of gross receipts tax revenues in

September. In FY 06, this distribution amounted to $260 thousand, down from $402 thousand in FY 02.[55] Counties and municipalities also receive funding a number of road-related state assistance programs, including the municipal arterial program and funding for school bus routes, and there are federal distributions, e.g., federal Taylor Grazing Act distributions, as well as a number of federal grant programs for which counties and municipalities may be eligible. Intergovernmental assistance is critical to the provision of local government services in New Mexico.

Table 5. Major State of New Mexico Distributions to Local Governments of Taxes and Other Revenue Sources, Excluding Gross Receipts Tax

TAX AND OTHER REVENUE DISTRIBUTIONS
CHAVES, EDDY & LEA COUNTIES & INCORPORATED MUNICIPALITIES,
FY 05 Unless Otherwise Noted

	Small Cities Assistance	Gasoline Taxes Road/Street	Gasoline Taxes General	Motor Vehicle Fees Road/Street	Motor Vehicle Fees General	Cigarette Taxes	Fire Fund Distributions	Law Enforcement Fund Distributions
CHAVEZ COUNTY								
County Govt		334,719	17,572	605,819	128,398	54,383	573,003	42,200
Dexter	81,965	20,145	31,815	1,486	199	1,785	92,502	21,800
Hagerman	81,965	5,356	6,994	999	134	2,172	97,640	21,800
Lake Arthur	81,965	5,004	138	339	45	-	45,402	21,200
ROSWELL		270,363	366,727	119,825	55,197	79,583	376,864	79,800
EDDY COUNTY								
County Govt		301,706	24,669	562,077	155,085	176	858,210	43,400
Artesia*		112,796	156,331	37,657	3,300	27,010	70,232	34,400
CARLSBAD		178,465	254,148	81,242	19,458	54,383	223,545	61,200
Hope	35,000	5,004	623	-	-	23	48,820	20,000
Loving *	81,965	10,384	15,329	-	-	3,075	46,251	20,600
LEA COUNTY								
County Govt		304,111	16,179	571,400	167,529	182,134	126,764	41,000
Eunice	35,000	12,624	14,869	5,574	1,387	4,289	51,389	23,000
HOBBS		232,478	372,956	100,045	18,074	49,533	216,697	69,000
Jal	81,965	10,409	17,343	3,519	876	3,120	48,820	22,400
Lovington	81,965	51,689	77,477	16,996	3,123	15,418	51,389	30,200
Tatum*	37,123	12,362	20,334	1,311	180	2,076	46,251	14,320

NM Dept of Finance, Local Government Division

New Mexico counties and municipalities have authority to impose two special taxes, a lodgers tax, the proceeds of which can be used for certain types of facilities and for tourist promotion, and a local option gasoline tax (1 cent or 2 cents), which may be used for certain types of transportation projects and programs. Table 6 gives the lodgers tax distributions for each county or municipality in the ELEA region that has imposed this tax along with the tax rate. No local governments have imposed the local option gasoline tax, which requires a positive referendum. In addition to these taxes, local governments often impose franchise fees or taxes on electricity and gas utilities, and on providers of telecommunications services (e.g., local phone service, cable TV), for the use of local government right-of-way. Thus, in 2006, Eddy County had franchise tax revenues of $8,556 and Lea County generated $24,619 from this source, while franchises

[55] The figures provided on other local government revenue sources are all taken from the State of New Mexico Department of Finance and Administration Local government Division, *Financial and Property Tax Data by County and Municipality, Fiscal Year 2006 (2005 – 2006),* which reports detailed financial information for each county and municipality by fund.

taxes produced general fund revenues of $1.4 million for Hobbs, $762 thousand for Carlsbad, and $3.3 million for Roswell.

Finally, New Mexico counties and municipalities impose various fees and charges for services. Certain municipal and county services, like water and sewer systems and airports, are frequently run like enterprise operations, with rates that recover capital as well as operating costs. Enterprise funds in Roswell generated $31.6 million in

Table 6. Lodgers Tax Revenues in Imposing Jurisdictions, Chaves, Eddy and Lea Counties

							Annual Growth	
	2002	2003	2004	2005	2006	2007	2002 - 06	07 1st half
CHAVEZ COUNTY								
ROSWELL	504,977	515,792	548,021	597,334	639,216	392,518	6.1%	20.8%
rate	5%	5%	5%	5%	5%	5%		
EDDY COUNTY								
County Govt	78,536	82,108	88,424	77,805	69,112	24,612	-3.1%	-30.4%
rate	5%	5%	5%	5%	5%	5%		
Artesia*	118,667	118,177	125,874	125,270	167,874	99,569	9.1%	16.1%
rate	5%	5%	5%	5%	5%	5%		
CARLSBAD	436,251	417,429	421,161	437,792	484,914	275,479	2.7%	9.5%
rate	5%	5%	5%	5%	5%	5%		
LEA COUNTY								
HOBBS	134,598	130,126	150,960	259,741	458,401	304,976	19.6%	29.1%
rate	3%	3%	3%	5%	5%	5%		
Lovington	18,975	18,975	19,880	29,101	44,997	28,213	9.2%	23.1%
rate	3%	3%	3%	3%	5%	5%		

* Lodgers Tax Rate Changes: Hobbs, 2-1-05; Lovington, 7-1-05

NM Dept of Finance, Local Government Division

revenues in FY 06 to offset some $38.3 million in expenditures, while Hobbs enterprise funds raised $11.2 million to cover $11.8 million in total expenditures. Carlsbad enterprise fund revenues were $11.6 million, with total expenditures in 2006 of $7.2 million.

Many general government programs use fees and charges for services to recover some costs and also to discourage over-use. Thus, developers are frequently charged for building permits and local recreation programs may charge fees to participants. Of the $20.5 million in general fund revenues in Carlsbad, $2.6 million came from charges for services, while $192 thousand were generated by various license and permit fees. Charges for services brought $4.0 million into the general fund in Hobbs in 2006, while the various permit fees generated over $200 thousand, together accounting for more than 10% of general fund revenues.

TEXAS

Texas local governments make much more use of the property tax than is true of their New Mexico counterparts. According to the Tax Foundation, in 2004, property taxes per capita in Texas were $1,254, versus $441 in New Mexico. Texas ranked 12th among the states, while New Mexico ranked 48th.[56] By contrast, state and local gross receipts taxes per capita in Texas in FY 04 were $852, giving the state a ranking of 19th, while per capita gross receipts taxes in New Mexico were $1,028, putting the state in 10th place.[57] While not a local government revenue source, New Mexico's personal income tax per capita in 2006 ranked it 36th among the states. Texas, along with Alaska, Florida, Nevada, and South Dakota had no personal income tax.[58]

[56] http://www.taxfoundation.org/taxdata/show/251.html
[57] http://www.taxfoundation.org/taxdata/show/275.html
[58] http://www.taxfoundation.org/taxdata/show/1389.html

Part 5

Transportation Infrastructure

TRANSPORTATION INFRASTRUCTURE

Figure 1 shows the transportation grid serving the ELIA proposed GNEP site. Included on the map are federal interstates, federal highways, state highways and other major roads, bus stations, railroad tracks, and airports.

Figure 1: Transportation Infrastructure Surrounding the ELEA Proposed

Roads

Figure 1 shows the road network for the eastern half of New Mexico and West Texas. As can be seen from the map, the Chaves-Eddy-Lea County area is framed but not touched by several Interstates: I-40 accessible to US 285 from Carlsbad, Artesia or Roswell to the north; I-20, accessible to US 285 from Carlsbad to the South or from various routes through Midland-Odessa; I-27 to the northeast, accessible through Lubbock; and I-10, accessible to US 62 to El Paso; and I-25, some distance to the west, accessible by different routes..

Figure 2 provides more detail on the road network surround the GNEP site. The pink roads are 4-lane divided highway, the blue are 2-lane paved, and the gray are county, BIA or Forest Service. There are no interstates nor are there other controlled access roads.

Figure 2: Road Map of the Larger ELEA Area

Source: New Mexico Department of Transportation

Carlsbad, NM is served by US 180/62 east and west and US 285 north and south. As the map indicates, US 180/62 is a 4-lane highway between Carlsbad and Hobbs east to Seminole. During 1998, U.S. Route 285 was widened to four lanes to provide direct access to Interstate 40. US 285 is now a 4-lane highway from Clines Corners on I-40 east of Albuquerque down to Loving south of Carlsbad. Carlsbad is also served by NM 243, which is a two lane paved road that joins US 285 north of Carlsbad and by NM 128, a two-lane paved road to the southeast of Carlsbad which goes down to Jal.

Hobbs, NM is served by US180/62 east and west and by NM 18 north and south. NM 18 is a 4-lane highway from Lovington to Jal. Hobbs is linked to Artesia via NM 529, a 2-lane paved road, and to Denver City, Texas, to the northeast via NM 132, a 2-lane road.

NM 176 is a two lane paved road off of US 62/180 that would provide access from the GNEP site down to Eunice and east to Andrews, Texas.

Exhibit 1 provides a description of the various Lea and Eddy County road projects that have been or that will be funded out of the $1.6 billion GRIP program. No projects were listed for Chaves County, although there are projects for Roosevelt and Curry Counties.

Exhibit 1. Summary of GRIP Projects in Eddy and Lea Counties

US 62 - Texas State Line to Carlsbad
Reconstruction and rehabilitation of the existing two lanes to an enhanced two-lane facility with widened shoulders and periodic passing opportunities. This section of roadway is severely deteriorated. This route accommodates tourists going to Carlsbad Caverns National Park, which is the most visited park in New Mexico. Target dates for construction: March-2005 to December-2009.
NM 128 - Jal to Texas State Line
Realignment and reconstruction of the first ten and one-half miles in order to relocate the roadway away from salt lakes. Reconstruction and improvement of the remainder of the route to address severely deteriorated surfacing and poor subgrade. Improvements will include widened lanes and shoulders. Target dates for construction: March-2005 to December-2009.

Exhibit 1. Summary of GRIP Projects in Eddy and Lea Counties, continued

NM 8 - Eunice to Junction US 62 W of Hobbs

Reconstruction and rehabilitation of the existing lanes with the addition of 8 ft. shoulders. Improvements include replacement of drainage and pavement structures. This facility is a main corridor for oil field traffic and is vital to the local economy. Target dates for construction: December-2008 to June-2010.

NM 83 - Lovington East to NM 132

Reconstruction and rehabilitation of the deteriorated existing two lanes with the addition of 8 ft widened shoulders. Improvements include replacement of pavement structure, drainage structures, guardrail, permanent signing and striping. This facility is a main corridor for oil field traffic and is vital to the local economy. Target dates for construction: Target dates for construction: April-2008 to October-2009

US 62 - Eddy/Lea County Line to Texas S/L

Enhanced two-lane facility. Reconstruction and improvement of existing two lanes with the addition of 8 ft widened shoulders. Improvements include replacement of pavement structure, drainage structures, guardrail, permanent signing and striping. The existing roadway is severely deteriorated and is a main corridor for oil field truck traffic. Target dates for construction: September-2004 to July-2008

US 380 - Tatum to Texas State Line

Reconstruction of existing two lanes to include shoulder widening and drainage structure replacement. The existing roadway is severely deteriorated and distressed due to heavy oil field truck traffic. This will improve the mobility of people and goods in the area. Target dates for construction: August-2004 November-2008.

Source: http://www.nmgrip.com/summary.asp#15059

The Proposed Site is 34 miles from Carlsbad, NM and 37 miles from Hobbs, NM. The site is also approximately 12 miles north of the Waste Isolation Power Plant (WIPP). Travel distances and times for Hobbs and Carlsbad are given in Table 1. All times subject to road conditions.

Table 1: Driving Times from Hobbs and Carlsbad

From	To	Distance	Approximate Driving Time
Hobbs, NM	Artesia, NM	77 miles	1.5 hours
Hobbs, NM	Carlsbad, NM	70 miles	1.5 hours
Hobbs, NM	Roswell, NM	118 miles	2.5 hours
Hobbs, NM	Lubbock, TX	110 miles	2.5 hours
Hobbs, NM	Midland/Odessa, TX	102 miles	2.25 hours
Hobbs, NM	El Paso, TX	234 miles	5 hours
Hobbs, NM	Albuquerque, NM	319 miles	5.75 hours
Carlsbad, NM	Artesia	36 miles	0.75 hour
Carlsbad, NM	Roswell, NM	77 miles	1.5 hours
Carlsbad, NM	El Paso, TX	165 miles	3.5 hours
Carlsbad, NM	Lubbock, TX	179 miles	4 hours
Carlsbad, NM	Midland/Odessa, TX	184 miles	3 hours
Carlsbad, NM	Albuquerque, NM	278 miles	4.75 hours

Air Travel

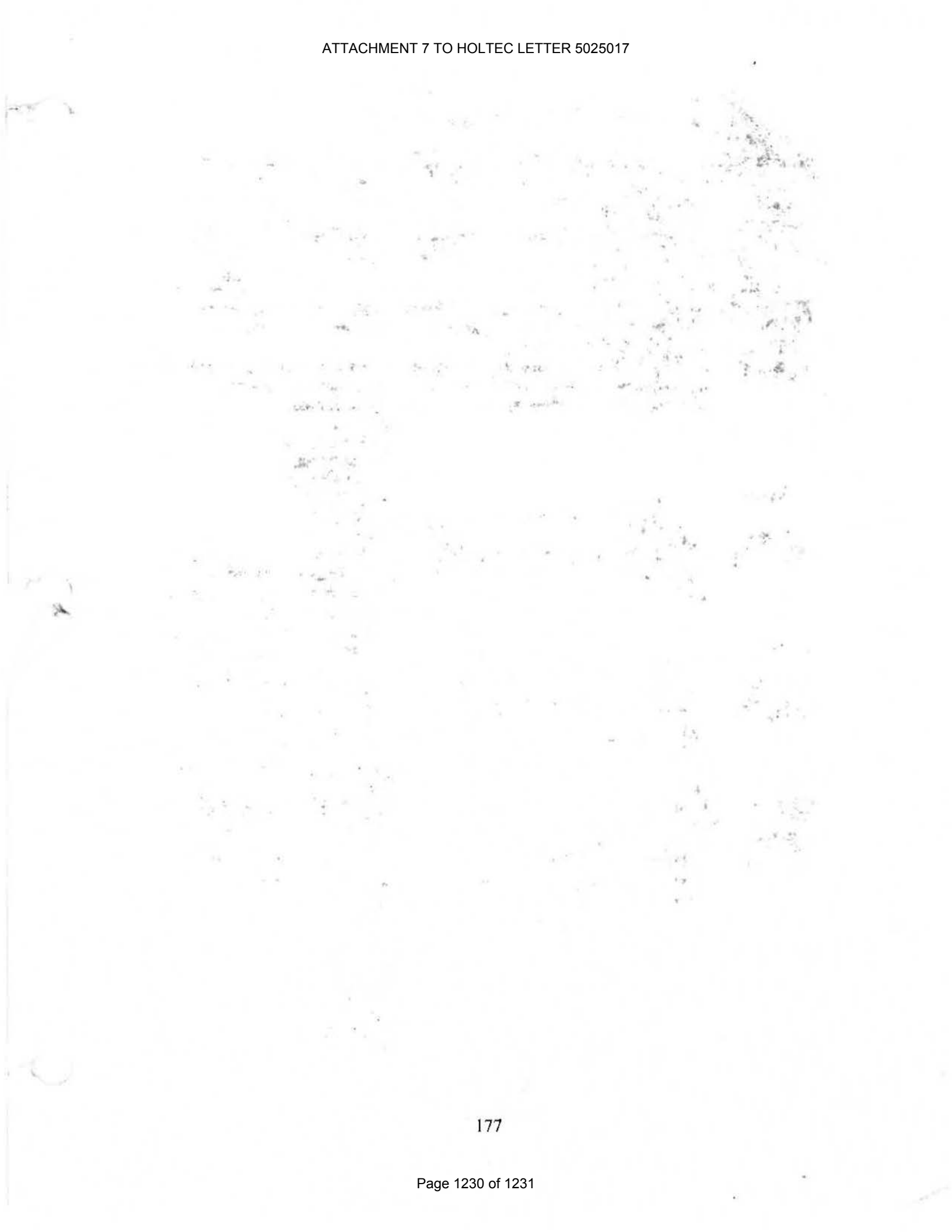
As can be seen from Figures 1 and 2, there are a number of small municipal airports within the area. Most of these airports are for general aviation and private use, with no regularly scheduled passenger flights. Table 2 describes the air service provided in the immediate and larger area. The Lea County Regional Airport in Hobbs has two regularly scheduled flights to Albuquerque via Carlsbad. The Cavern City Air Terminal in Carlsbad has two flights per day to Albuquerque. The service to both cities has been provided by Mesa Airlines using a 19-seat commuter plane[59]. However, the Hobbs and Carlsbad routes will be taken over by Pacific Wings and the end of May. In the future, the company may provide direct flights to El Paso, to Midland-Odessa, as well as to Albuquerque, using a 9-person light plane. The hope is that the smaller planes will significantly reduce delays.

The next closest airport is the Roswell International Air Center in Roswell, New Mexico. There are a total of 3 flights per day going directly to Albuquerque. Mesa Airlines use the same 19 seat planes used at the other sites.

[59] http://www.mesa-air.com/index.asp

Table 2: Air Service in the Region

Location	Airport	# of Flights	Capacity	Carrier	Destinations
Hobbs, NM	Lea County Regional Airport	2 in/out per day	19 seat planes	Mesa Airlines	Carlsbad to Albuquerque
Carlsbad, NM	Cavern City Air Terminal	2 in/out per day	19 seat planes	Mesa Airlines	Connecting between Hobbs and Albuquerque
Roswell, NM	Roswell International Air Center	3 in/out per day	19 seat planes	Mesa Airlines	Albuquerque, NM
Albuquerque, NM	Albuquerque International Sunport	About 322 commercial flights/day	Multiple sizes	Southwest, American, Continental Delta, Frontier, Northwest, US Airways multiple regional carriers	Nonstop to 39 cities
Midland, TX	Midland International Airport	Several/day	Multiple sizes	ContinentalAmerican, Southwest Airlines. Mostly smaller commuter flights.	Austin, Dallas/Fort Worth, Houston, El Paso, Houston, Las Vegas and Albuquerque
Lubbock, TX	Lubbock Preston Smith International Airport	Several/day	Multiple sizes	American, ContinentalSouthwest Airlines. Multiple small commuter flights	Austin, Dallas/Fort Worth, Houston, El Paso, Las Vegas and Albuquerque
El Paso, TX	El Paso International Airport	Multiple flights from multiple carriers	Multiple sizes	American, ContinentalDelta, US Airways, United, Frontier, Southwest many smaller carriers.	Nonstop to 18 cities



Bus and Transit Service

Inter-city service to both Carlsbad and Hobbs is provided by Greyhound.

Public transit service within Hobbs is provided by the City's transportation department, which operates both fixed bus routes as well as a shuttle service within the Hobbs city limits[60]. The bus service operates Monday through Saturday, 7:00 am to 5:00 pm. Service is along three routes within the City limits and costs $1.00 per trip. Hobbs Express provides a curb-to-curb shuttle service primarily for the disabled. The service requires a 24-hour reservation and is available from 7:00am to 5:00pm Monday through Saturday. There is a $2.00 fee each way.

Carlsbad also runs a curb-to-curb shuttle service requiring a 24 hour reservation[61]. This service operates from 5:00am to 8:30pm Monday through Friday and 5:00am to 5:00pm on Saturday. The cost is $1.00 each way. The shuttle primarily services people with disabilities, seniors, students and those in some kind of government work program.

Train

Passenger rail service is not available in Hobbs or Carlsbad. There is Amtrak service out of El Paso and Alpine, TX and in Albuquerque[62].

Freight service is available through the Burlington Northern and Santa Fe Railroad[63]. The short-line track runs south from Clovis, where this north south line intersects with the major east-west service also provided by BN&SF, to Pecos Junction and Rustler Springs in Texas south of Carlsbad. There are major rail yards in Roswell and Carlsbad, and there are rail spurs out to the potash mines and other locations in reasonable proximity to the proposed GNEP site.

In Lea County, there is a short-line run by the Texas and New Mexico Railroad (TNMR). TNMR operates this freight service from a connection with UP at Monahans, TX to Lovington, NM, 107 miles away. The rail is 85 pound. Traffic includes LPG, liquid asphalt, aggregate, cotton, scrap metal, salt cake, sand, sulfuric acid, and hazardous waste - about 3,900 cars per year.[64] Major improvements are currently in the works for this service.[65]

---

[60] http://www.hobbsnm.org/transportation.html
[61] http://www.cityofcarlsbadnm.com/community_development/transit/index.html
[62] http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/Page/Routes_Index_Page&c=Page&cid=1080072922209&ssid=4
[63] http://www.bnsf.com/
[64] http://home.austin.rr.com/aldossantos/TNM.htm
[65] This according to Bethe Cunningham of the Lea County Economic Development, TNMR never returned BBER phone calls.