

**Joelle Sierra**

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**From:** Terri Hall [REDACTED]  
**Sent:** Friday, September 04, 2009 3:08 PM  
**To:** Interchange  
**Subject:** Comments for CE for interchange

**Terri Hall, Founder/Director, Texans Uniting for Reform and Freedom (TURF), (210) 275-0640,  
[www.TexasTURF.org](http://www.TexasTURF.org), 18866 Stone Oak Pkwy, Ste. 103-37, San Antonio, TX 78258**

**TURF Comments on 281/1604 Interchange**

**Stimulus Bait & Switch:**

**Interchange is an RMA bailout, excuse not to fix 281 north**

Texans Uniting for Reform and Freedom (TURF) is a non-partisan, grassroots group of 100,000 Texans with concerns about transportation policy, toll roads, and public private partnerships. We believe the stimulus and Proposition 14 money that's been allocated to the 281/1604 interchange is not being used where the need is the greatest. The area's greatest bottleneck is on US 281 north of Loop 1604.

**The "slice & dice" interchange – an RMA bailout!**

Here's the rub over the stimulus money. WOAI news radio reported January 14: "For the first time ever, officials (*Alamo Regional Mobility Authority*) are floating a proposal to build the long planned new main lanes of US 281 outside of Loop 1604, without making them toll lanes." Yet in the project list submitted to the Transportation Commission for stimulus funds, it clearly lists 281 as a toll road! Alamo RMA Chairman **Bill Thornton** promised it would remain a freeway if they got stimulus money for it (read it here): "If the project is paid for through federal funds, you don't need that option of tolling." But they never submitted 281 as a non-toll project and never intended to do a non-toll fix as these documents show. Then in yet another twist, the RMA abandoned the freeway fix completely to pursue the interchange.

It's a bait and switch and the public is SICK and TIRED of the misleading information, broken promises, and outright lies coming this agency. The grassroots have been working to get TxDOT and the Alamo RMA to work with the community on a smaller scale, more affordable, non-toll solution for these freeways.

The public was promised a non-toll solution for 281 in NEPA hearings in 2001 (money has been allocated for the fix since 2003), and that's what they're still asking to have done on 281. TxDOT and the RMA have promised for years if a new pot of money came out of nowhere, they'd keep them freeways. Now they've got it (stimulus money), and they're still going to end-up tolling our freeways, which doubles the footprint of the freeway fix.

Then AFTER the first bait and switch (abandoning a non-toll fix to 281 and seeking to build the interchange instead), the RMA then went from promising to build the entire interchange (8 direct connects) toll-free to only building HALF (4 connectors) of it toll-free, without adjusting the price downward. So they're building HALF an interchange for the price of WHOLE one in yet another betrayal of the public trust.

The reason they don't want to build the northbound connections is because they plan to toll them (as shown in MPO documents dated February 23, 2009, that stated "connections to managed lanes optional" -- managed lanes are toll lanes). When angry taxpayers made such a stink about using stimulus money on toll projects (which is a TRIPLE TAX), the RMA subsequently backed away from building the whole interchange knowing they'd get blowback if they came in later and tolled those ramps that were paid for already.

This Express-News article states only the southbound connectors would be built using the stimulus money. The RMA says the reasons they sliced and diced the interchange is because that's all they have money for. Just last year, the entire interchange cost was listed at \$150 million. Now they say \$143 million will only build half if it.

The interchange is a red herring to use up the stimulus money on something other than fixing the BIGGER problem, which is getting overpasses built on US 281 north to remove the stoplights from our freeway and get traffic moving again. **This interchange is an RMA bailout!**

Short of the environmental work for 281 and 1604, the RMA would have no reason to keep its doors open. So they blew the dust off an old categorical exclusion (CE) clearance and moved forward on whatever they could their hands on. They're grasping at straws to find anything they can call "shovel ready" to keep their doors open.

TURF believes this is a move to continue to press for a partially tolled interchange and toll road on US 281 north of Loop 1604. The RMA wants motorists stuck in unbearable, TxDOT-induced gridlock on 281 north to wither on the vine for 7-9 years until they get their toll road built.

This is another case of how the stimulus funds are going to fund the wrong projects (70% of them are being used to build toll roads in Texas). A toll tax adds economic distress, not help relieve it.

#### **RMA trying to have it both ways**

TxDOT and the Alamo RMA are using a "categorical exclusion" (or CE) exemption as a way to claim it has the "clearance" to get away with building a 5 STORY interchange. First it was a re-evaluation of an old CE, then it became a new CE. Either way, it's the WRONG category for a project of such enormity adjacent to a residential neighborhood (City of Hollywood Park, where TURF has many supporters), where noise levels alone for such elevated ramps require deeper environmental study of the impacts.

This category is used for minor changes to intersections or resurfacing, and meant for changes that have literally NO IMPACT. How can they say a 5 level interchange has NO IMPACT? Yet they used this same exemption to build an overpass and add two extra lanes for a wealthy subdivision called the Dominion (off I-10 north of Loop 1604), and claim it can't be used to build overpasses on 281 with stimulus or other funds.

They can't have it both ways, but they will if the FHWA doesn't intervene.

Next, how can they build an interchange without knowing what it will connect to (a toll road, 6 lanes, 8 lanes, some tolled, some not what)? By locking-in the configuration of the interchange, they lock in the long-term plan for both those freeways. Also, to our knowledge, the new CE document is not completed, so how can the RMA hold a public meeting for comment on a document that doesn't even exist yet? Again, how can this be an honest process given this approach?

One of our attorneys, **Andrew Hawkins**, summarizes our concerns this way: "If the interchange they propose to build nails down the configuration for both 281 and 1604, then the analysis of alternatives -- which is the most important part of the NEPA process --

becomes entirely meaningless.

“Since the financing and design of 281&1604 all tie together, then the only honest way to look at alternatives is to look at comprehensive alternatives for the whole system -- which basically means looking at alternatives to serve transportation needs for the aquifer region. Segmenting, or piecemealing, the project as they now propose **would severely prejudice the outcomes.**”

**Joelle Sierra**

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**From:** Bob [REDACTED]  
**Sent:** Friday, September 04, 2009 3:00 PM  
**To:** Interchange  
**Cc:** 'Bob'  
**Subject:** US 281/Loop 1604 Interchange Open House Comments  
**Attachments:** Comment%20Form 1604\_281 Interchange.pdf  
  
**Importance:** High

Below and attached are my comments for the 281 Loop 1604 Interchange Open House that I wish to be included in the record.



# ALAMO RMA

REGIONAL TRANSPORTATION ASSOCIATION  
"Serving the Valley Forward"

US 281 Loop 1604 Interchange  
Community Open House Comment Form  
August 25, 2009 Meeting

Name: **BOB SARTOR**

Address: **43 ASHFORD GLEN**

City, State Zip **SAN ANTONIO (HOLLYWOOD)**  
**TX 78232**

Email: [REDACTED]

Comment: **(COMMENTS ON NEXT PAGE)**

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Please include your name and mailing address with all written comments. Comment forms and/or letters should be mailed to US 281 Super Street c/o Alamo RMA, 1222 N. Main Ste 1000, San Antonio, TX 78212. **All written comments received or postmarked by Friday, September 4, 2009, will be included in the official record of the community open house.**

Comments can be:  
Emailed to [Interchange@AlamoRMA.org](mailto:Interchange@AlamoRMA.org)  
Faxed to 210-495-5403 attention US 281 / Loop 1604 Interchange Project  
If you would like to mail your form, please add postage to this self-addressed form.



US 281 Loop 1604 Interchange Open House comments (25 Aug 09)

Bob Sartor  
43 Ashford Glen  
San Antonio (Hollywood Park), TX 78232  
[REDACTED]

I am concerned about the additional cut-through traffic through Hollywood Park that will be created during construction AND even after completion due to the current design. I am also concerned with the increased noise, light, and exhaust pollution that will be caused by the EB 1604- SB 281 elevated connection unless added buffers are provided for.

With respect to the cut-through traffic, TXDOT MUST change the planned orientation of the 1604 access and connection ramps so that SB Stone Oak Blvd traffic will be able to take advantage of the EB 1604-SB281 connection ramp. Currently, the plan shows the connection ramp beginning before (to the West) of the EB 1604 frontage road access to EB 1604. This configuration does not allow for the Stone Oak Blvd traffic to use the new connection ramp. Of all the new ramps, this particular ramp has the most available real estate available to allow for the 1604 frontage road access to 1604 ramp to be located between Stone Oak Blvd and the beginning of the EB 1604-SB 281 connection ramp. Stone Oak traffic using Stone Oak Blvd would be able to turn on to the EB 1604 frontage road (as they do now) and then access 1604 then transition to the connection ramp to proceed to SB 281. If the ramps are not adjusted, the Stone Oak traffic will not be afforded the opportunity to take advantage of the new connection ramp and thus either continue to 281 via the crowded frontage road as they do today OR will cut through Hollywood Park, exiting at Donella and 281. This current planned configuration further appears to discriminate against the Hollywood Park businesses located on the Southern 1604 frontage road, East of the Stone Oak Blvd/Voight-1604 interchange.

With respects to the increased noise, light, and exhaust pollution, the elevated EB 1604-SB 281 ramp connector will increase the pollution levels unless mitigated by buffers or some other means. With the current two-level interchange, the trees in the South-West quadrant from the 1604/281 intersection have provided some buffering. With the new ramp connectors, the increased height of the structure will have overflow of noise, light, and exhaust pollution over the trees and in to Hollywood Park.

## Joelle Sierra

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**From:** Jac Yon [REDACTED]  
**Sent:** Thursday, September 03, 2009 2:59 PM  
**To:** Interchange  
**Subject:** US 281 and Loop 1604 interchange improvements

I am in complete support of this project to add non-toll interchanges at this intersection. Please move forward in a most expeditious manner. The amount of pollution we put in the atmosphere should be significantly reduced. The lost productivity time can be recovered. Auto Insurance costs could come down for area residents.

Thanks for moving forward.

**Joelle Sierra**

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**From:** Nicole Simmons [REDACTED]  
**Sent:** Sunday, August 30, 2009 11:38 AM  
**To:** Interchange  
**Subject:** loop 1604/281 interchange

I can't wait till this is done. The proposed plan looks great. I live off of Bulverde Rd and 1604 and the traffic is horrible at 1604/281. Since driving on 10/410 interchanges, the new construction with those ramps made things so much smoother and quicker getting to the connecting highway.

Nicole Simmons

**Joelle Sierra**

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**From:** Mark Jones [REDACTED]  
**Sent:** Sunday, August 30, 2009 7:08 PM  
**To:** Interchange  
**Subject:** Comment

I want to express my support for the proposed improvement to the interchange at 281 and 1604.

My thanks to those who put this all together.

Mark Jones  
2526 Rim Oak  
San Antonio TX 78232



September 4, 2009

US 281 / Loop 1604 Interchange Project  
Alamo Regional Mobility Authority  
1222 N. Main Avenue, Ste 1000  
San Antonio, Texas 78212  
Via Email: [Interchange@AlamoRMA.org](mailto:Interchange@AlamoRMA.org)

Re: Initial comments on US 281 / Loop 1604 Interchange Project

Dear Alamo RMA:

On behalf of Aquifer Guardians in Urban Areas ("AGUA"), Save Our Springs Alliance ("SOSA"), thank you for the opportunity to comment on US 281 / Loop 1604 Interchange Project. AGUA and SOSA are non-profit environmental advocacy groups dedicated to the protection of the Edwards Aquifer, its hill country watersheds and its ecosystems.

As you may already know, we strongly disagree with the issuance of a Categorical Exclusion ("CE") under the National Environmental Policy Act ("NEPA") for what is being called the US 281 / Loop 1604 Interchange Project. CEs cover "a category of actions which do not individually or cumulatively have a significant effect on the human environment." 40 C.F.R. section 1508.4; see also 23 C.F.R. section 771.115(b). In our view, the interchange falls well short of meeting this category. It is extremely incongruent to label a construction project of this scale and in this context as "safety and operational improvements" that should be categorically excluded. This approach does not square with the reality of the potentially significant noise, air, water, travel, endangered species, and construction impacts that the project will generate.

In light of pending Environmental Impact Statements for US 281 and Loop 1604, a CE for the interchange at US 281 and Loop 1604 is an especially inappropriate and prejudicial course of action that would violate NEPA. Rather than continuing to piecemeal the environmental review of what has always been planned as a single integrated highway expansion project, we urge Alamo RMA to prepare a comprehensive EIS for the entire US 281 & Loop 1604 system, interchange included. Under the

circumstances, it is arbitrary and capricious to prepare three separate documents (i.e. two EISs and one CE) for one project.

We incorporate into these comments, and attach for your convenience, the entirety of the letter that we send to the Federal Highway Administration on the topic of NEPA review of the US 281 & Loop 1604 system. This letter more fully explains why a CE for the interchange is not an acceptable course of action under NEPA or the particular facts surrounding the interchange. See Attachment #1.

Concerning effects on the Edwards Aquifer and related water resources, we incorporate the attached comments of Dr. George Veni, an authority on the Edwards Aquifer and karst hydrogeology. See Attachment #2. Although these comments discuss older NEPA studies, many of the comments still apply, as this interchange is located over the Edwards Aquifer recharge zone and in sensitive karst zones constituting endangered species habitat. We also incorporate and attach a document that further details the context of this project in terms of the Edwards Aquifer, endangered species, and likely impacts relevant to any road-capacity expansion. See Attachment #3.

From what we have heard, the open house for the 281&1604 project presented little information on impacts to the Edwards Aquifer (the sole drinking water supply for the City of San Antonio) and little detail on other site-specific environmental impacts of building and operating the interchange. This is troubling, as it reflects a continued effort to short-cut NEPA and the requirement to openly and honestly evaluate environmental impacts. And because there is such a minimal public process for this CE, which does not allow for a meaningful public dialogue about the actual effects from the interchange, the rigorous standard of public participation imposed by NEPA is not being met. Nor are proper agency coordination and consultation (e.g. with USFWS) requirements likely to be met under the CE approach.

Again, we urge the Alamo RMA to not prepare a CE for the interchange, as this will only aggravate the rather substantial public and scientific controversy that already exists with respect to the improvements planned for US 281 and Loop 1604. Instead, the Alamo RMA should prepare a single comprehensive Environmental Impact Statement including the entire US 281 and Loop 1604 expansion project and interchange.

Sincerely,



Andrew Hawkins  
Save Our Springs Alliance

/s/ Enrique Valdivia  
Aquifer Guardians in Urban Areas



March 2, 2009

Jack Gilbert  
Special Assistant U.S. Attorney  
Federal Highway Administration  
Atlanta, Georgia

VIA EMAIL

Re: *AGUA et al v. FHWA et al.*

Mr. Gilbert:

Following up on our recent emails, we urge you and your client to take control of the NEPA process for US 281/Loop 1604 and put an end to piecemeal review of this project. Specifically, we ask FHWA to direct the preparation of a single EIS for 281/1604, including the interchange, so as to give the community the comprehensive and honest evaluation of project impacts and alternatives that NEPA requires.

Plaintiffs AGUA and TURF seek to have the 281/1604 "starter toll system" studied in one EIS because of, among other things, the integrated financing recognized in Judge Biery's February 5, 2009 order. Like Judge Biery, we think it is commonsensical to view the improvements to 281 and 1604 as an "Aristotelian whole." On the law and the facts of this case, it has become even less defensible to exclude Loop 1604 from the pending EIS.

It is also arbitrary, under the circumstances, to pull out the 281/1604 interchange as a separate project. Notwithstanding the pending EIS and ongoing litigation concerning 281/1604, the Alamo Regional Mobility Authority is trying to construct the interchange within the next year, relying on a 2005 Categorical Exclusion. FHWA should not allow this end run around the NEPA process for 281/1604, as the interchange is an unseverable part of the 281/1604 project.

Immediate construction of the 281/1604 interchange would invariably control subsequent development and unfairly prejudice consideration of alternatives for 281/1604 in the pending EIS. In fact, the March 2005 CE is distinctly geared to the implementation of the "starter toll system," stating on the first page that "improvements to this interchange described in this document would conform to other planned improvements to both Loop 1604 and US 281 in this area." As part and parcel of the "starter toll system" that is currently under environmental review and subject to ongoing litigation, we urge FHWA to consider whether constructing the interchange under this CE is a prudent and unbiased course of action.

While an EIS is being prepared, “[a]gencies shall not commit resources prejudicing selection of alternatives before making a final decision.” 40 C.F.R. § 1502.2(f). FHWA has a duty to see that no action is taken that would “limit the choice of reasonable alternatives.” *Id.* at § 1506.1(a)(2). “Interim action prejudices the ultimate decision when it tends to determine subsequent development or limit alternatives.” *Id.* at § 1506.1(c)(3).

Whether the interchange is itself tolled or non-tolled, funded with stimulus money or not, it will be the centerpiece of the financially and operationally interdependent 281/1604 project. It is impossible to build the interchange without determining future development and without prejudicing the consideration of more environmentally-sound, sensible alternatives in the pending EIS.

A Categorical Exclusion, in any case, is not an appropriate level of NEPA documentation for the five-level interchange proposed for 281/1604. FHWA regulation 23 C.F.R. § 771.117(a) states that CEs are for actions that:

do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts.

Nowhere is it suggested in the CEQ regulations, FHWA regulations, or even TxDOT’s Environmental Manual, that it is normal to approve a five-level interchange with a Categorical Exclusion. On its face, the interchange’s impacts and effect on travel patterns are distinguishable from typical CE projects involving safety or non-capacity improvements. Reliance on a CE is further undermined by potentially significant noise impacts, the interchange’s environmentally-sensitive location over the Edwards Aquifer, and the history of litigation and controversy surrounding 281/1604.

In sum, we ask FHWA to revoke the CE for the interchange and to help the Alamo RMA engage the community in an open and honest EIS process covering the entire 281/1604 project. We hope you and your client will give serious thought to our proposal, as we believe a single EIS would best serve the community’s transportation needs and protect San Antonio’s sole source of drinking water.

Thank you for your consideration. We look forward to hearing from you.

Sincerely,

/s/ Bill Bunch and Andrew Hawkins  
Attorneys for Plaintiffs AGUA and TURF

Cc: Linda Amidon, FHWA

Terri Hall, TURF  
Enrique Valdivia, AGUA

UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
SAN ANTONIO DIVISION

AQUIFER GUARDIANS IN URBAN )  
AREAS, and PEOPLE FOR )  
EFFICIENT TRANSPORTATION, INC. )

Plaintiffs, )

v. )

No. Civ. SA-05-CA-1170-XR

US FEDERAL HIGHWAY )  
ADMINISTRATION, and MICHAEL W. )  
BEHRENS, Executive Director, Texas )  
Department of Transportation, )

Defendants. )

DECLARATION OF DR. GEORGE VENI

I, George Veni, hereby declare:

1. On behalf of the Save Our Springs Alliance, this affidavit is my evaluation and professional opinion on the potential impacts to groundwater and rare and endangered karst species by the Texas Department of Transportation and the Federal Highway Administration (collectively "TxDOT") proposal to widen U.S. Highway 281 over the Edwards Aquifer recharge zone in north Bexar County, Texas.
2. My qualifications in conducting this evaluation are that I am a hydrogeologist specializing in caves and karst terrains. I received my Master's degree from Western Kentucky University in 1985. My Master's thesis was on the effects of urbanization on the quality and quantity of water recharging the Edwards Aquifer in Bexar County (Veni, 1985), which includes the highway project area. In 1994, I received my Ph.D. from the Pennsylvania State University. My doctoral dissertation was on the hydrogeology of the nearby and

hydrogeologically related karstic Lower Glen Rose Aquifer in Bexar, Blanco, Comal and Kendall counties, Texas (Veni, 1997a). Since 1987, I have owned and served as principal investigator of George Veni and Associates, providing karst hydrogeological, biological, and environmental research and consultation services. My firm's expertise with karst hydrogeology has frequently made it the preferred choice of the U.S. Fish and Wildlife Service, the Texas Parks and Wildlife Department, U.S. Department of Defense, and many private firms for regional and site-specific geological and biological assessments of karst areas. Several of my projects have been to hydrogeologically and biologically evaluate TxDOT highway construction projects as a subcontractor for intermediary firms. In addition, I am the President of the Texas Speleological Survey, a non-profit corporation that serves as the database for Texas cave and karst information, Adjunct Secretary to the Governing Bureau of the International Union of Speleology, and until July 2005, Executive Secretary of the National Speleological Society's Section of Cave Geology and Geography for 11 years. Thus, I have detailed knowledge of caves and karst systems locally and around the world. As a result of my contributions to cave biological research, three cave-dwelling species have been named in my honor. I hold U.S. Fish and Wildlife Service Permit TE026436-0 (currently under renewal) to collect and study federally listed endangered Texas karst invertebrate species. My complete, current vita is attached by e-mail to this affidavit.

3. The highway project area is located in northern Bexar County, Texas. It extends from about 640 m north of Loop 1604 along U.S Highway 281 northward for about 5,470 m to the intersection with Marshall Road and encompasses the highway and areas along either side proposed for expansion and/or modification by the conversion of the existing highway into a

toll road. All of this area is located over the Edwards Aquifer recharge zone and Karst Zones 1 and 2, which are areas known respectively to contain federal listed endangered invertebrate karst species or have a high probability of containing such species.

4. The Edwards Aquifer is a complex hydrologic system within the Edwards Limestone in the Balcones Fault Zone. It is divided into four segments: San Antonio, Barton Springs, Northern Balcones, and Washita Prairie (Yelderman, 1987). A drainage divide, an incised valley, and a gap of Edwards Limestone outcrop within the fault zone respectively separate the segments. The San Antonio Segment of the Edwards is divided into four zones: drainage or contributing zone, recharge zone, artesian or confined zone, and saline zone. The drainage zone is the upgradient non-Edwards Limestone area from which streams flow onto or cross the recharge zone, the exposure of Edwards Limestone within the fault zone where water enters the aquifer; the highway project area is entirely within the recharge zone in the aquifer's San Antonio Segment. The artesian zone is that area where the Edwards Limestone is down-faulted into the subsurface, and its groundwater is confined between upper and lower less permeable formations. The aquifer's largest springs occur where groundwater rises along fractures to discharge in stream valleys that intersect the potentiometric surface. The "bad water line" is the downgradient boundary of the artesian zone with the saline zone, where total dissolved solids in the groundwater exceed 1,000 mg/l. Groundwater flow in Bexar County is complicated but generally down-dip southward, then east or northeastward along strike. Studies of the aquifer are too many to mention in this affidavit. For a detailed listing of Edwards Aquifer investigations, see the bibliography by Esquilin (2004).

5. The Edwards is a karst aquifer, internationally recognized as the aquifer type most vulnerable to pollution. Texas' Groundwater Protection Unit (1989) supported this view by recognizing the Barton Springs and San Antonio segments of the Edwards as the aquifers most susceptible to contamination in the state. Karst aquifers have complex flowpaths that allow rapid, unfiltered movement of contaminants from source areas to water supplies through caves, solutionally enlarged fractures, and related conduits. This behavior is best studied and demonstrated by a method known as "tracer testing," which usually involves injecting a non-toxic fluorescent dye into a recharge feature or well and monitoring the time and concentration in which it appears at springs or other wells. The dye delineates groundwater flowpaths and also functions as a surrogate for the distribution and impact of possible contaminants that might enter the aquifer. Hauwert's et al. (1998) dye tracing studies in the Barton Springs Segment of the Edwards Aquifer demonstrated velocities up to 800 m/day during normal flow conditions and more than 6,400 m/day during high flow. I have conducted groundwater traces in Bexar County which demonstrated groundwater velocities of up to 4,054 m/day (Schindel et al., 2005). I have also conducted tracer studies that show rainfall on a typical fractured limestone surface in this region vertically penetrates the Edwards Limestone at rates as fast as 18 m/hour (Shade and Veni, 2005). I performed these studies in parts of the Edwards Aquifer recharge zone that are only 4-9 km west of and hydrogeologically identical to the highway project area.
6. The U.S. Environmental Protection Agency (EPA) promotes tracer studies as the most effective means of delineating groundwater flowpaths in karst areas (Schindel et al., 1996). The American Society for Testing and Materials (ASTM), a not-for-profit

organization founded in 1898, which provides global consensus standards for, among other things, quality systems for studies, has provided standards for environmental impact analyses of karst aquifers. Over 100 nations, including the United States, are members of ASTM International. As with the EPA, dye tracing studies are an important component of the ASTM standards for studying the movement and effects of pollutants in karst areas and delineating protection areas.

7. In contrast to these nationally and internationally accepted standards, the State of Texas uses a geological assessment procedure based solely on looking at a possible recharge feature and using geological experience and untested criteria to determine the feature's potential hydrological significance and vulnerability to contaminants. A professionally published and peer-reviewed study I conducted (Veni, 1999a) found that the geologic assessment method required at that time by the State was only 33.7% accurate, and underestimated the significance of 57.1% of karst features; that method has been revised, but not reevaluated to determine its efficacy. No survey for and/or geological assessment of recharge features was conducted during the 1984 or 2000 environmental assessment of the highway project area (Texas State Department of Highways and Public Transportation, 1984; Turner, Collie, and Braden, 2000), and apparently none was conducted during the 2004 environmental assessment (unknown author, 2004).
8. The vulnerability of the Edwards Aquifer to contamination is illustrated by pollutants appearing in water wells with apparently increasing frequency in the San Antonio area where urban development over the recharge zone is greatest. The U.S. Geological Survey associated most contaminants in the aquifer with urban activities in San Antonio (Ging et

al., 1997). Since then, additional reports of contaminants in aquifer water continue to be recorded and monitored by the Edwards Aquifer Authority and other agencies.

9. In addition to occurring over the Edwards Aquifer recharge zone, the highway project area also extends through an area known to contain karst invertebrate species federally listed as endangered. In December 2002, the U.S. Fish and Wildlife Service listed nine invertebrate species, known only from northern Bexar County, as endangered due primarily to adverse impacts associated with the area's urbanization (USFWS, 2000). The northern 4,120 m (75.3%) of the project area extends through Karst Zone 1 where the listed species are known to occur; the southern 1,350 m (24.7%) of the project area extends over Karst Zone 2 where there is a high probability of the species being present. I originally delineated these zones for the U.S. Fish and Wildlife Service in 1994 (Veni and Associates, 1994) and updated them in 2002 (Veni, 2002). In that latter study I reported:

The intent of the distinction between Zone 1 and Zone 2 areas [in the 1994 mapping] was that Zone 2 was where no reason was known to preclude the presence of the listed species, but that the listed species were not known. In most cases, Zone 2 areas were locations where caves were not known and/or biological surveys in the caves had not been conducted. It has since been found that in areas where adequate biological surveys for the species have been conducted in Zone 2, listed species have been found to redesignate them as Zone 1.

10. While caves are known in Karst Zone 2 near the project area, no known biological surveys have been conducted to determine if the listed species are present. At least 13 caves in Karst Zone 2 within 2 km of Highway 281 have been destroyed or filled by road and urban construction and none were biologically evaluated (Texas Speleological Survey, unpublished data). The species most likely to occur in the project area are the ground beetles *Rhadine exilis* and *Rhadine infernalis*. These species are known to occur only in caves and related interstitial voids. Seven caves known to contain these species occur within 2.9 km of

the project area, with the closest cave located within 380 m (Veni, 2002). Listed species with a low likelihood of being present are the Madla's cave spider *Cicurina madla*, found 11.9 km to the west (USFWS, 2000), and *Eurycea tridentifera* (Comal Blind Salamander), currently on the Texas list of threatened species (Campbell, 1995). Its nearest known localities are 10.2 km to the southwest and 18.4 km to the northwest (Veni, 1988; Chippindale et al., 2000), with an unconfirmed possible sight record only 2.9 km west of the highway project area (James Loftin, personal communication 2000). The remaining listed karst species are not known to occur near the study area.

11. To the best of my knowledge, three environmental assessments (EAs) were conducted for the highway project. The first was conducted in 1984 by the Texas State Department of Highways and Public Transportation. The second and third were reevaluations conducted in 2000 and 2004 respectively by Turner, Collie and Braden and by an author not listed in the complete body of the EA made available to me.
12. The 1984 and 2000 EAs are general summaries of the project but offer little or no data or analyses to support their claims that the project will produce no significant environmental impacts. At best, these EAs might serve as summaries of findings, but since they do not appear based on any in-depth research of the highway project area, they fail as reliable sources of information. Neither EA cites any research to support its conclusions. The most egregious fact in each EA is that they both conclude the highway project will produce no significant environmental impacts yet both state they have not conducted all of their research. If the research is not complete, conclusions cannot be justifiably drawn. In the 2000 EA is the further error in the conclusion that "there have not been any significant changes in the assessed area" since the 1984 EA, yet the 2000 EA recognizes the extension

of the project through Karst Zone 2 where there is a high potential for endangered species to be found (the species were candidates for listing at that time and had not been considered for listing in 1984).

13. The 2004 EA is superior to the earlier EAs, yet is still inadequate. It analyzes and cites some census data for the region but does not cite or present any information relative to the aquifer and endangered species protection that can be reviewed and used to justify its conclusions. There is no discussion of a geological assessment for recharge features, yet the EA finds no significant impacts even though a water pollution abatement plan, which in large part is based on a geological assessment, has not been completed. I found no discussion on the installation of sedimentation, filtration, or other structures to reduce the adverse quality of runoff from the highway. Nor did I find any plans to install hazardous materials traps to keep spills of hazardous material on that high-traffic roadway from entering Mud Creek, tributaries creeks, and the Edwards Aquifer. Further, there is no indication that the authors of the report recognize the limitations of these water pollution prevention methods, especially in karst areas. Highway water quality studies at The University of Texas at Austin have found that different structural controls have different rates of pollutant removal; some methods that reduce certain contaminants may increase others (Barrett et al., 1995; Tenney et al., 1995). All structural controls require regular maintenance to be effective, but a large percentage in Bexar County are out of compliance and apparently ineffective, despite State and local oversight (according to newspaper reports circa 2002-2003, as best as I recall). This is critical in karst because data from several studies clearly demonstrate that because of karst aquifers' high vulnerability to pollution, the presence of contaminants over a karst recharge zone is the most critical factor in assessing the risk of groundwater contamination,

not the presence or absence of observed individual recharge features as current required by the State of Texas (e.g. Ogden et al., 1991).

14. The 2004 EA reports that surveys were conducted for karst features that may provide habitat for endangered invertebrate species, but those reports are not presented or even cited for reference and review. It is not possible to assess the quality of those surveys with the information presented. This is important because some of the information presented suggests they were conducted by personnel with limited expertise in karst. For example: a) The nearest known locality for the listed species is given as 2.4 km (1.5 miles) to the east, when in fact, five caves with endangered species are known within that distance from the highway project area, with the closest locality only 380 m to the west. b) No request was made of the Texas Speleological Survey for information on caves and karst features in that area to be certain that no important information was overlooked and that all relevant endangered karst species localities were considered. This step is recommended by the U.S. Fish and Wildlife Service (2004), which has written its guidance in large part based on my reports and research (I authored or co-authored all seven reports cited in that guidance). c) The conclusion that “the origin of all of the voids appears to be related to Cretaceous paleokarst that predates the origin of the endangered species” is highly unlikely. Even if true, the age of the voids has no bearing on the presence or absence of the species.
15. The most important deficiency in the 2004 EA is the stark contrast to the Highway 183A TxDOT toll road project near Austin, Texas. That highway project is functionally identical in that it extends across the recharge zone of the Edwards Aquifer and through Karst Zone 1 and Karst Zone 2 for related endangered invertebrate species. In that case, extensive research and consultation led to the biological opinion by the U.S. Fish and Wildlife Service

which required issuance of an incidental take permit under the condition that the following actions occur during the construction of the highway:

1. During any land clearing or excavation (trenching, scraping, bulldozing, etc...) in Karst Zones 1 and 2 a qualified karst geologist will remain on-site to ensure detection of any caves, karst features, or subterranean voids that may be encountered. Excavation on the remainder of the project will not require a site geologist be present, but the procedures below will still be followed if any caves, karst features, or subterranean voids are encountered.
2. If any caves, karst features, or subterranean voids are encountered during construction, then construction work within 200 feet of the encountered voids will halt until project environmental consultants have completed necessary evaluations. A qualified karst geologist will respond immediately to evaluate the void geologically to determine if it has the potential to contain endangered karst invertebrate habitat. If the potential for habitat is evident, the Service will be notified immediately. FHWA / TxDOT / CTRMA will have the feature examined by a Service-permitted biologist for the presence of the listed karst invertebrates, following Service protocols. At a minimum, three biological collection surveys will be conducted on three separate days over a period not greater than one week to determine the presence or absence of the listed invertebrates or other species of concern. Between surveys, voids should be covered to prevent drying, but still allow nutrient input. A report of the surveys, including climate data inside and outside of the cave, will be submitted to the Service.
3. If no endangered or threatened species are determined to be present in an encountered feature, environmental consultants will issue specific instructions in accordance with standard practices accepted by Texas Commission on Environmental Quality, as applicable, for any particular void. Whether sealed or not, voids will not allow any contamination into the karst ecosystem. Construction activity will then resume with the carrying out of those specific instructions.
4. If endangered, threatened or species of concern are determined to be present within an encountered feature, FHWA / TxDOT / CTRMA will consult with the Service to determine the best available measures to avoid or minimize impacts to the feature, if possible. Reinitiation of section 7 consultation may be required if impacts to listed species are beyond those authorized in the biological opinion.

16. It is important to point out that this biological opinion (Pine, 2005) required these monitoring actions (which benefit Edwards Aquifer protection as well as endangered species) and issuance of an incidental take permit only after considerable study of the


highway and potential alternate routes were conducted before construction. This included detailed searches for karst and recharge features, excavation of features to determine their hydrological and biological significance (e.g. Raba-Kistner-Brytest, 1996; Veni, 1997b, 1998, 1999b; Veni and Reddell, 2003), and consideration of the results in planning avoidance and mitigation measures, which included the purchase and protection of un-impacted land containing the listed species. These studies and actions were conducted in accordance with U.S. Fish and Wildlife Service guidance available at that time on evaluating and protecting caves with endangered species (USFWS 2001a,b,c).

17. The proposed Highway 281 project occurs entirely on the recharge zone of the Edwards Aquifer, which is a federally designated sole source aquifer and the primary public water supply for the City of San Antonio and associated communities. It also occurs entirely within zones known to contain federally listed endangered species or which have a high probability of containing such species, with the nearest locality situated only about three highway right-of-way widths from the project area. The highway project under these conditions individually, and certainly when combined, constitutes a major federal action with potentially significant adverse environmental effects considering the high vulnerability of these natural resources to degradation and the potential for public health impacts. Even if the EAs were not wholly or partly inadequate, an environmental impact statement is needed to properly assess the proposed project, its alternatives, and means of mitigation which should at least equal the superior evaluation, monitoring, permitting, and mitigation actions of the similar Highway 183A project which involves similar endangered karst species and less crucial groundwater protection issues since that segment of the Edwards is not federally designated as a sole source aquifer.

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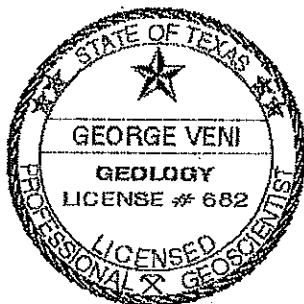
Pursuant to 28 U.S.C. § 1764, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.


Dated this 13th day of December 2005.

  
George Veni, Ph.D.

In accordance with the Texas Board of Professional Geoscientists rules at 22 Texas Administrative Code, Part 39, Chapter 851, Subchapter C, §851.156, this report is signed and sealed to assure the user that the work has been performed by or directly supervised by the following professional geologist who takes full responsibility for this work

The computer-generated seal appearing on this document were authorized by George Veni, Ph.D., P.G. 682, on 13 December 2005.



  
George Veni, Ph.D., Texas Professional Geoscientist No. 682 13 December 2005

**References:**

ASTM. 1995. Standard guide for design of ground-water monitoring systems in karst and fractured-rock aquifers. D 5717 – 95, American Society for Testing and Materials, 18 pp.

Barrett, Michael E., Joseph F. Malina, Jr., Randall J. Charbeneau, and George H. Ward. 1995. Water quality and quantity impacts of highway construction and operations: summary and conclusions. Technical Report 266, Center for Research in Water Resources, The University of Texas at Austin, 35 pp.

Campbell, Linda. 1995. Endangered and threatened animals of Texas: their life history and management. Texas Parks and Wildlife Department, Austin, 130 pp.

Chippindale, Paul T., Andrew H. Price, John J. Wiens, and David M. Hillis. 2000. Phylogenetic relationships and systematic revision of central Texas hemidactyliine plethodontid salamanders. Herpetological Monographs 14: 1-80.

Eckenfelder, Inc. 1996. Guidelines for wellhead and springhead protections area delineation in carbonate rocks. Report 904-B-97-003, Groundwater Protection Branch, Region 4, U.S. Environmental Protection Agency.

- Esquilin, Roberto. 2004. Edwards Aquifer bibliography through 2003. Report 04-01, Edwards Aquifer Authority, San Antonio, Texas, 198 pp.
- Ging, Patricia B., Linda J. Judd, and Kirby H. Wynn. 1997. Water-quality assessment of south-central Texas—occurrence and distribution of volatile organic compounds in surface water and ground water, 1983-1994, and implications for future monitoring. Water-Resources Investigations Report 97-4028, U.S. Geological Survey, 20 pp.
- Ground Water Protection Unit. 1989. Ground-water quality of Texas - an overview of natural and man-affected conditions. Texas Water Commission, Report 89-01, 197 pp. + 3 plates.
- Hauwert, Nico M., David A. Johns., and Thomas J. Aley. 1998. Preliminary report on groundwater tracing studies within the Barton Creek and Williamson Creek watersheds, Barton Springs/Edwards Aquifer. Barton Springs/Edwards Aquifer Conservation District and City of Austin Watershed Protection Department, 57 pp.
- Ogden, A.E., K. Hamilton, E.P. Eastburn, T.L. Brown, and T.L. Pride, Jr. 1991. Nitrate levels in the karst groundwaters of Tennessee. In *Appalachian Karst*, Proceedings of the Appalachian Karst Symposium, Ernst H. Kastning and Karen M. Kastning, eds., National Speleological Society, pp. 197-203.
- Pine, Robert T. 2005. Letter to Ted West of the U.S. Federal Highway Administration amending the U.S. Fish and Wildlife Service Biological Opinion of 21 May 2001. U.S. Fish and Wildlife Service, Austin, Texas, 8 pp.
- Raba-Kistner-Brytest Consultants, Inc. 1996. Final report: karst terrain feature survey and bird habitat evaluation survey, Leander Rehabilitation Site, Williamson County, Texas. Report for Carter & Burgess, Inc., Raba-Kistner-Brytest Consultants, Inc., Austin, Texas, 16 pp.
- Schindel, Geary M., John R. Hoyt, Steven B. Johnson, George Veni, Bradford P. Wilcox, Clyde L. Munster, Susan D. Hovorka, Charles W. Kreidler, and Beverley L. Shade. 2005. An introduction to the Balcónes Fault Zone segment of the Edwards Aquifer in south-central Texas. Field trip guidebook for the 2005 Ground Water Summit, National Ground Water Association, 81 pp. + 1 pl.
- Schindel, Geary M., James F. Quinlan, Gareth Davies, and Joseph A. Ray. 1996. Guidelines for wellhead and springhead protection area delineation in carbonate rocks. Region 4, U.S. Environmental Protection Agency, EPA 904-B-97-003.
- Shade, Beverley L., and George Veni. 2005. Intensive monitoring of drip water in two shallow caves. International Congress of Speleology, Athens, Greece, (published on CD, printed version in press).
- Tenney, Sean, Michael E. Barrett, Joseph F. Malina, Jr., Randall J. Charbeneau, and George H. Ward. 1995. An evaluation of highway runoff filtration systems. Technical Report 265, Center for Research in Water Resources, The University of Texas at Austin, 133 pp.

Veni, George. 1985. Effects of urbanization on the quality and quantity of storm water runoff recharging through caves into the Edwards Aquifer, Bexar County, Texas. Western Kentucky University, unpublished thesis, xv + 233 pp., 1 pl.

Veni, George. 1988. The caves of Bexar County, second edition. Speleological Monographs, 2, Texas Memorial Museum, Austin, 300 pp.

Veni, George. 1997a. Geomorphology, hydrogeology, geochemistry, and evolution of the karstic Lower Glen Rose Aquifer, south-central Texas. Ph.D. dissertation, Pennsylvania State University, published as Texas Speleological Survey Monographs, 1, Austin, Texas, xi + 409 pp.

Veni, George. 1997b. Hydrogeologic investigation of Big Oak Cave, Williamson County, Texas. Report for Hicks and Company, George Veni and Associates, San Antonio, Texas, 19 pp.

Veni, George. 1998. Survey and preliminary hydrogeologic investigation of karst features along study corridors, proposed State Highway 183-A, Williamson County, Texas. Report for Hicks and Company, George Veni and Associates, San Antonio, Texas, 22 pp.

## THE PROJECT'S AFFECTED AREA IS THE MOST ECOLOGICALLY SENSITIVE REGION IN THE STATE

The area over which the proposed improvements to the US 281/Loop 1604 interchange are located is the most ecologically sensitive area of Texas. It is home to multiple endangered species, and overlies the federally designated sole source drinking water aquifer that provides water to over 1 million people. San Antonio is also one of the fastest growing cities in the nation. That growth is especially intense along the US 281 corridor to the North, overlying the Edwards Aquifer Recharge Zone. That growth has already outstripped the ability of local government to provide essential services such as adequate wastewater disposal systems leading to waste discharges that pollute already impaired waterways.<sup>1</sup> All told, then, the environment in the project area is simply waiting for the figurative straw to break the camel's back.

### A. The Edwards Plateau Is Home to Multiple Endangered Species

There are presently at least eleven federally listed species that occur in Bexar County, two neotropical migratory songbirds and nine karst invertebrates. These eleven listed species include the Golden-cheeked warbler (*Dendroica chrysoparia*), the black-capped vireo (*Vireo atricapilla*), the Helotes mold beetle (*Batrisodes venyivi*), Madla's Cave meshweaver (*C. madla*), the Robber Baron Cave meshweaver (*C. baronia*), the Vespera Cave Meshweaver (*C. vespera*), the Braken Bat Cave Meshweaver (*C. venii*), Government Canyon Bat Cave Spider (*Neoleptoneta microps*), the Robber Baron Cave harvestman (*Texella cokendolpheri*), and two beetles with no common name, *Rhadine exilis* and *Rhadine infernalis*.

Additionally, nine other species listed as threatened, endangered, or candidate species reside in the San Marcos, Comal, Fern Bank, and Hueco springs and their associated aquatic ecosystems. Seven of these species are endangered, including Peck's cave amphipod (*Stygobromus pecki*), Comal Springs riffle beetle (*Heterelmis comalensis*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), San Marcos gambusia (*Gambusia georgei*), fountain darter (*Etheostoma fonticola*), Texas blind salamander (*Typhlomolge ratbuni*), and Texas wild-rice (*Zizania texana*). The San Marcos salamander (*Eurycea nana*) is listed as threatened and the Cagle's map turtle (*Graptemys caglei*) is designated as a candidate species.

Furthermore, there are an untold number of species waiting to be discovered. As one study stated, "[t]here are of course undiscovered caves with undiscovered species, undiscovered species in known caves, and undescribed species from one or more caves."<sup>2</sup>

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<sup>1</sup> Lisa Sorg, *What Goes in Must Come out*, San Antonio Current, 4/5/06 ("population growth outpacing the treatment plant's capabilities").

<sup>2</sup> David C. Culver, et al., *Obligate Cave Fauna of the 48 Continuous United States*, 14(2) J. Society for Conservation Biology 386 (Apr. 2000); see also David C. Culver and Boris Sket, *Hotspots of Subterranean Biodiversity in Caves and Well*, 62 J. Cave and Karst Studies 11, 16 (Apr. 2000) (noting that there are a great many undiscovered species at such sites as San Marcos Springs).

Consequently, it is not just the known and listed species that are susceptible, it is the entire region's biodiversity that is at risk from habitat destruction;<sup>3</sup> disease and predation by invasive species;<sup>4</sup> and spills, leaking storage tanks, and other sources of surface and groundwater pollution.<sup>5</sup> Research has shown that amphibians, such as those found in the aquifer and its springs, are particularly sensitive to many contaminants including heavy metals, pesticides, nitrites, salts, and petroleum hydrocarbons.<sup>6</sup> The toxic effects from such contaminants may be either lethal or sublethal and may include morphological and developmental aberrations, lowered reproductive and survival rates, and changes in behavior and certain biochemical processes.<sup>7</sup> Even if a particular species is not directly impacted, its food chain certainly is.<sup>8</sup>

Unfortunately, tetrachloroethene (PCE), a solvent used in degreasing and dry cleaning, along with toluene and xylene—gasoline and paint solvents—have already been found in the springs in which many of these species live.<sup>9</sup> Even a compound that is an indicator of sewage has been detected.<sup>10</sup> Overall, then, the status quo for these species is particularly precarious even without the introduction of additional threats arising from the construction and maintenance of improvements to US 281/Loop 1604 interchange.

#### *B. The Edwards Aquifer Is the Sole Drinking Water Supply for Over One Million People*

Ever since 1975, the San Antonio segment of the Edwards Aquifer has been designated as the principal source of drinking water for San Antonio and the surrounding areas.<sup>11</sup> That means that, currently, the Edwards is the sole drinking water supply for over one million people.<sup>12</sup>

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<sup>3</sup> For instance, it is estimated that 26 percent of known caves in Bexar County have been destroyed through filling, capping or covering by roads, and blasting by construction operations. United States Fish and Wildlife Service, *Final Rule to List Nine Bexar County, Texas Invertebrate Species as Endangered*, 65 Fed. Reg. 81,419, 81,425 (Dec. 26, 2000).

<sup>4</sup> For instance, of 36 caves visited while conducting a status survey of nine endangered invertebrate species, fire ants were found in 26 caves. Of 24 caves confirmed to contain one or more of these species, at least 15 had fire ant infestations at a time during the year when fire ants had not even likely reached peak densities. *Id.* at 81,426.

<sup>5</sup> *Id.* at 81,425.

<sup>6</sup> United States Fish & Wildlife Service, *Barton Springs Salamander Recovery Plan* 1.6-5 (Sept. 2005).

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> Paul M. Buszka, Steven D. Zaugg, & Marilyn G. Werner, *Determination of Trace Concentrations of Volatile Organic Compounds in Ground Water Using Closed-Loop Stripping, Edwards Aquifer, Texas*, 45 Bull. Environ. Contam. Toxicol. 507, 510-13 (1990).

<sup>10</sup> *Id.*

<sup>11</sup> 40 Fed. Reg. 58,344 (Dec. 16, 1975).

<sup>12</sup> According to the 2000 Census, over 1.14 million people resided in San Antonio alone.

In designating the Edwards as a sole-source aquifer, the EPA administrator noted that the Edwards “is vulnerable to contamination through its recharge zone, particularly from streams crossing the zone.”<sup>13</sup> That recharge zone is marked by outcrops of porous and permeable Edwards Limestone (also known as karst limestone) that are exposed to the surface. This exposed rock features numerous caves, sinkholes, faults and fractures formed where rainfall and creek and stream flows have dissolved large amounts of the limestone such that surface water rapidly flows and percolates into the underground Edwards Aquifer. Due to the highly permeable nature of the recharge zone, the Aquifer is particularly vulnerable to pollution from runoff. For this reason, it is well recognized that the recharge zone is among the most environmentally sensitive areas in Texas.<sup>14</sup> Since contamination of a ground water aquifer is difficult or impossible to reverse, the Administrator found that “contamination of the Edwards Underground Reservoir would pose a significant hazard to those people dependent on the reservoir for drinking purposes.”<sup>15</sup>

Unfortunately, urban development has already impacted water quality in the aquifer. For instance, leaks and spills have already contaminated drinking water wells in the past.<sup>16</sup> One assessment of water quality throughout the San Antonio region of the Edwards Aquifer found 28 human-made volatile organic compounds in samples from 89 different wells.<sup>17</sup> These VOCs included carcinogenic benzene and toluene. The assessment concluded that the VOC detections were “associated with urban development” and that there exists a greater future potential for VOC contamination because of increasing development in the aquifer recharge zone.<sup>18</sup>

The lack of any central distribution facility makes treatment for any contamination especially cost-ineffective. As such, the best protection for San Antonio’s drinking water supply is prevention. For that reason, San Antonio voters have twice in the past six years approved 1/8-cent sales tax increases to pay for and permanently preserve land over the recharge zone. This not only helps preserve the quality of the water in the Aquifer, it also helps maintain the supply of that water—increased impervious cover and urbanization cause the water that would otherwise infiltrate into the Aquifer to runoff and bypass the aquifer instead. With the supply of water in the Edwards Aquifer already being pushed to its limits by increasing population, reducing the recharge into the Aquifer will have wide-scale ramifications.

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<sup>13</sup> 40 Fed. Reg. 58,344 (Dec. 16, 1975).

<sup>14</sup> See Texas Water Development Board at 14.

<sup>15</sup> *Id.*

<sup>16</sup> Rudolph Bush, *Gas Spill Fouls Third Trinity Aquifer Well*, San Antonio Express-News, 8/4/1999, at 3B.

<sup>17</sup> Patricia B. Ging, Linda J. Judd, & Kirby H. Wynn, *Water-Quality Assessment of South-Central Texas—Occurrence and Distribution of Volatile Organic Compounds in Surface Water and Ground Water, 1983-94, and Implications for Future Monitoring*, United States Geological Survey, Water-Resources Investigations Report 97-4028, at 12 (1997).

<sup>18</sup> *Id.* at 16.

Overall, it is clear that the environment impacted by construction on the US 281/Loop 1604 interchange is particularly fragile and sensitive to disruption. Even “slight” impacts, therefore, rank as significant.

### **INCREASING ROAD CAPACITY IS LIKELY TO HAVE SIGNIFICANT IMPACTS ON THE HUMAN AND NATURAL ENVIRONMENT**

Roads strongly affect surrounding ecosystems.<sup>19</sup> Whenever a road is built or expanded, there are three types of resulting impacts: construction impacts, operational and maintenance impacts, and long-term impacts, each with its own distinctive spatial and temporal frame and each with distinctive but cumulative impacts.<sup>20</sup>

Under federal regulations, Alamo RMA must analyze all of these impacts.<sup>21</sup> This includes not only ecological impacts, but also “aesthetic, historic, cultural, economic, social, or health [impacts], whether direct, indirect, or cumulative.”<sup>22</sup> Consequently, each of the above phases and all of their impacts *must* be assessed.

#### *Construction Impacts*

The environmental impacts arising from road construction consist of direct, localized, and acute alterations of physical conditions. The fact that some of these impacts may only be temporary in nature does not excuse their evaluation and analysis.<sup>23</sup> Even though highway construction may only cover a small portion of a watershed, “the effects can be substantial.”<sup>24</sup> These impacts include the addition of fine sediments to nearby waterways, channelization of streams, disruption of groundwater flows, soil erosion, and habitat destruction.<sup>25</sup>

Furthermore, construction equipment contributes to noise and air pollution, along with light pollution from nighttime operations. There is also the ever present likelihood that existing infrastructure such as sewer lines or pipelines will be damaged resulting in spills and releases of sewage, chemicals, and other pollutants. For instance, while

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<sup>19</sup> See generally Paul L. Angermeier, Andrew P. Wheeler, and Amanda E. Rosenberger, *A Conceptual Framework for Assessing Impacts of Roads on Aquatic Biota*, Fisheries 19, 21-23 (Dec. 2004); Reed Noss, *The Ecological Effects of Roads – or – the Road to Destruction*, at <http://www.wildlandscpr.org/resource/library/reports/ecoleffectsroads.html>; Michael E. Barrett, et al., *A Review and Evaluation of Literature Pertaining to the Quantity and Control of Pollution from Highway Runoff and Construction (CRWR Online Report 95-5)* (Center for Research in Water Resources April 1995); Caltrans, *A Review of the Contaminants and Toxicity Associated with Particles in Stormwater Runoff* (August 2003); Richard T. T. Forman, et al., *Road Ecology: Science and Solutions* 202-07 (2003).

<sup>20</sup> Angermeier, *supra* note 19, at 21-23.

<sup>21</sup> See 40 C.F.R. §§ 1508.7, 1508.8.

<sup>22</sup> 40 C.F.R. § 1508.8.

<sup>23</sup> See 40 C.F.R. § 1508.27(b)(7) (“Significance cannot be avoided by terming an action temporary.”).

<sup>24</sup> Barrett, *supra* note 19, at 51.

<sup>25</sup> See *id.* at 21 and studies cited therein.

clearing right of way along US 281, construction equipment sheared off some valves on a sewage line resulting in raw sewage being spilled onto the ground that was left to percolate into the Edwards aquifer.<sup>26</sup> Such an event occurring over the recharge zone during construction of the improvements to the US 281/Loop 1604 interchange will surely result in a significant impact to the environment.

Roadway construction also directly results in clearing right of way through existing and native vegetation. This not only has an aesthetic impact but it also facilitates the invasion of exotic species of weeds, pests, and pathogens, which can then disperse to colonize adjacent native communities. For example, clearing the right of way could lead to the spread of oak wilt disease.

Construction, of course, will also likely cause traffic delays and problems,<sup>27</sup> impacts that are all too often overlooked by planners. In many cases, driver delays due to construction are so long, and the timesavings predicted from the finished project so minor, that it can take years for commuters to break even and begin to make up the time they lost during construction.<sup>28</sup> These delays, along with the noise, dust, and vibration associated with road construction also negatively impact nearby commercial property values.<sup>29</sup>

On top of it all, it must not be forgotten that highway construction also adversely affects the Edwards Plateau's endangered species populations. For instance, past and future highway construction was identified as a specific threat to the golden-cheeked warbler.<sup>30</sup> These roads destroy and fragment warbler habitat, creating edge habitat ill-suited for the warblers' needs.

In all, these are just some of the impacts associated with road construction. Collectively, as well as individually, these impacts constitute a likely significant impact to the environment.

#### *Operation and Maintenance Impacts*

Even after construction is complete, roads and highways continue to be environmentally "present," serving as constant sources of pollution. Paved surfaces increase total volume and maximum flow rates of runoff, causing erosion and altering

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<sup>26</sup> Amy Dorsett, *Sewer Leak Over Aquifer*, San Antonio Express-News (Jan. 12, 2006).

<sup>27</sup> Surface Transportation Policy Project, *Road Work Ahead: Is Construction Worth the Wait* 3 (1999).

<sup>28</sup> *Id.*

<sup>29</sup> Brian ten Siethoff and Kara M. Kockelman, *Property Values and Highway Expansions: An Investigation of Timing, Size, Location and Use Effects* 8, at [http://www.ce.utexas.edu/prof/kockelman/public\\_html/trb02us183propvalues.pdf](http://www.ce.utexas.edu/prof/kockelman/public_html/trb02us183propvalues.pdf).

<sup>30</sup> United States Dept. of Fish and Wildlife, *Endangered and Threatened Wildlife and Plants; Final Rule to List the Golden-cheeked Warbler as Endangered*, 55 Fed. Reg. 53,153, 53,157 (Dec. 27, 1990).

stream hydrology.<sup>31</sup> They also interrupt existing sheet flows, acting as dams to redirect runoff from its original course.<sup>32</sup>

Typical pollutants found in this runoff include sediments, nutrients, including nitrogen and phosphorus; heavy metals such as lead, zinc, iron, copper, cadmium, chromium, nickel, and manganese; cyanide, sulfates, and petroleum-based hydrocarbons.<sup>33</sup> Nutrients overload systems leading to long-term potential for eutrophication.<sup>34</sup> Sediments and particulates decrease flow capacity, reduce storage volumes, smother benthic organisms, decrease water clarity, and interfere with the respiration of small fish. Toxic heavy metals settle into sediments and are lethal to aquatic organisms.<sup>35</sup>

The source of all these toxic pollutants is the vehicles that use the road.<sup>36</sup> One assessment of chemicals found along roads found that 19 of the 23 pollutants detected came from passing automotive traffic and that a full one-third of roadside pollutants come specifically from oil, grease, and hydraulic fluids. Engine wear produces 30%; metal plating and rust, 22%; tire wear, 22%; fuel and exhaust, 22%; and brake lining wear, 17%.<sup>37</sup> Other pollutants come from the deposition of exhaust gases and fumes. Even road lights contain hazardous levels of mercury, halide, and sodium vapors.

Toxic pollutants are also released into the environment from the millions of vehicle accidents that occur on the roads each year as well as illegal dumping.<sup>38</sup> As mentioned above, many of the endangered species found within the region are particularly sensitive to toxic pollutants. The potential for disaster, therefore, is high.

The impact from these pollutants, though, is not only limited to surface waterways. Groundwater is often affected as well, even without the assistance of the porous nature of the Edwards recharge zone.<sup>39</sup> For instance, zinc, iron, lead, and chromium have been found in groundwater underneath structural BMPs meant to control the discharge of such pollutants. Many studies have documented increasing levels of lead in plants with proximity to roads and with increasing traffic volumes.<sup>40</sup> The same is true for other heavy metals, which have been found to likewise increase with proximity to

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<sup>31</sup> Barrett, *supra* note 19, at 33.

<sup>32</sup> *Id.*

<sup>33</sup> Office of Water, United States EPA, *Erosion, Sediment and Runoff Control for Roads and Highways* (EPA-841-F-95-008d, Dec. 1995).

<sup>34</sup> *Id.* at 34-35.

<sup>35</sup> *Id.* at 34.

<sup>36</sup> Forman, *supra* note 19, at 202-07.

<sup>37</sup> *Id.* at 202.

<sup>38</sup> *Id.* at 206.

<sup>39</sup> Barrett, *supra* note 19, at 44-47.

<sup>40</sup> Noss, *supra* note 19.

roads, increasing traffic volumes, and decreasing soil depth. Many of these metals bioaccumulate, causing mortality in earthworm-eating animals.

Roadways also have air impacts that directly lead to adverse health effects in the neighboring communities and even have regional and global ecological effects. The release and generation of such air pollutants such as ozone, greenhouse gases, nitrogen dioxide, VOCs, PM-10 and PM-2.5, and mobile source air toxics such as benzene and others contributes to asthma, childhood leukemia and other cancers including lung cancer, heart attacks, and increased risk of premature birth and low birth weights.<sup>41</sup>

As mentioned earlier, air pollution from transportation sources already results in annual health-care related costs approaching \$200 million in the San Antonio region alone.<sup>42</sup> It would behoove Alamo RMA to know, then, what percentage of the additional VMT on an improved road will be comprised of polluting diesel trucks? What percent will be busses, single occupancy vehicles, etc. Alamo RMA must provide such analysis before it can dismiss the likely impacts to air from any improvements to the US 281/Loop 1604 interchange.<sup>43</sup>

Alamo RMA must also consider maintenance activities as well, such as full depth repairs, surface treatments, surface repairs, pothole patching, pavement jacking, cleaning pavement, guardrail repair, pavement marking, bridge surface cleaning, and deck repairs.<sup>44</sup> But it is not only repaving and repairing the actual roadway that has impacts, which are similar to those found during the construction phase, it is also mowing the

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<sup>41</sup> See generally Sierra Club, *Highway Health Hazards* (2004). See also Michelle Wilhelm and Beate Ritz, *Residential Proximity to Traffic and Adverse Birth Outcomes in Los Angeles County, California, 1994-1996*, 111 *Envtl. Health Persp.* 207 (Feb. 2003); Murray M. Finkelstein, Michael Jerrett, and Malcom R. Sears, *Traffic Air Pollution and Mortality Rate Advancement Periods*, 160 *Am. J. Epidemiol.* 173 (2004); Janice J. Kim, et al., *Traffic-related Air Pollution near Busy Roads*, 170 *Am. J. Respir. Crit Care Med.* 520 (2004); Ravi Maheswaran and Paul Ellio, *Stroke Mortality Associated with Living Near Main Roads in England and Wales*, *Stroke* 2776 (Dec. 2003); Gerard Hoek, et al., *Association Between Mortality and Indicators of Traffic-Related Air Pollution in the Netherlands: A Cohort Study*, *The Lancet* (Sept. 24, 2002); South Coast Air Quality Management District, *Multiple Air Toxics Exposure Study (MATES-II), Final Report* (Mar. 2000); Van Vliet, P., M. Knappe, et al. *Motor Vehicle Exhaust and Chronic Respiratory Symptoms in Children Living near Freeways*, *Envtl. Research* 122-32 (1997).

<sup>42</sup> Surface Transportation Policy Project, *supra* note **Error! Bookmark not defined.**, at 36.

<sup>43</sup> To the extent that Alamo RMA might tout potential improvements to the US 281/Loop 1604 interchange Road as reducing air pollution by reducing congestion, those initial reductions—if any—will be likely overridden by the air pollution generated by all the future growth in travel will arise. See *Citizens for a Better Env't v. Deukmejian*, 1990 U.S. Dist. LEXIS 7762, \*8 n.6 (N.D. Cal. 1990). One report notes that “the net differences in emission levels between the build and no-build scenarios are typically smaller than the error terms of the models,” and that model estimates “are imprecise and limited in their account of changes in traffic flow characteristics, trip making, and land use attributable to transportation investments.” Transportation Research Board, National Research Council, *Expanding Metropolitan Highways, Special Report 245 Implications for Air Quality and Energy Use* 6 (Nat’l Academy Press 1995). That report concluded that “it cannot be said that highway capacity projects are always effective measures for reducing emissions and energy use.” *Id.* Thus, it would be specious for Alamo RMA to summarily conclude that reducing congestion through improvements to the US 281/Loop 1604 interchange will reduce air pollution.

<sup>44</sup> Barrett, *supra* note 19, at 11.

grass along the right of way and applying pesticides and herbicides.<sup>45</sup> A survey of pollutants found along sides of roads revealed that roadbed and road surface wear accounted for 17% of the pollutants while herbicide and pesticide use accounted for 13%.<sup>46</sup>

All told, then, roads are a significant source of pollution into their surrounding environment.

Roads, though, are not only sources of physical pollution. Roads also generate noise. The impact of the noise, however, cannot only be measured in terms of human ears, but must also be measured in terms of the impact on the auditory lives of wild animals in the area.<sup>47</sup> For instance, studies have shown that highway noise can disrupt communication between birds, territory establishment and defense, and even reproductive behavior in toads and treefrogs.<sup>48</sup>

Roads may also even have negative economic effects. For instance, roads with adjoining frontage roads appear to be associated with lower household incomes and lower population densities, and higher unemployment relative to similar corridors without frontage roads.<sup>49</sup> Indeed, traffic has an overall negative impact on single-family house prices.<sup>50</sup>

Roads also result in greater frequency of wildfires, more trash, and higher rates of vehicle-wildlife collisions and death.<sup>51</sup> Indeed, over half of the wildfires in the United States begin along roads, whether from sparks or from discarded cigarettes.

All of these impacts are associated with any kind of road, whether elevated or at-grade. When elevated roads, though, are considered, a whole other set of significant impacts on the human and natural environment must be considered. For instance, studies from around the country demonstrate that freeway grade has an impact on nearby property values. For instance, a report by the Texas Transportation Institute confirmed that parcels adjacent to elevated highways experienced less percentage increases or greater percentage decreases in values from before and after construction relative to parcels adjacent to at-grade or depressed roadways.<sup>52</sup> Such findings have been repeatedly

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<sup>45</sup> *Id.* at 10-11.

<sup>46</sup> Forman, *supra* note 19, at 202.

<sup>47</sup> *Id.* at 271-73.

<sup>48</sup> Noss, *supra* note 19.

<sup>49</sup> Kara M. Kockelman, et al., *Frontage Roads: An Assessment of Legal Issues, Design Decisions, Costs, Operations, and Land-Development Differences*, Paper Submitted to Journal of Transportation Engineering, Oct. 8, 2001.

<sup>50</sup> William T. Hughes and C.F. Sirmans, *Traffic Externalities and Single-Family House Prices*, 32 J. Regional Science 487-500 (1992).

<sup>51</sup> See Noss, *supra* note 19.

<sup>52</sup> Carol A. Lewis, et al., *Land Value and Land Use Effects of Elevated, Depressed, and At-Grade Level Freeways in Texas*, Research Report 1327-2, at 97 (Tex. Transp. Inst. 1997).

replicated. For instance, a study in Boston revealed that proximity to the Central Artery negatively impacted of condominium prices.<sup>53</sup>

Furthermore, elevated roads create an eyesore and impede adjacent commercial development. Not surprisingly, the Capitol Area MPO found that elevated roads actually damage property values and lead to reduced sales tax receipts, reduced commercial activity, and the emergence of commercial grayfields.<sup>54</sup> This was specifically in evidence after U.S. 183 was elevated in North Austin. According to one report, after that road was elevated, the associated corridor “deteriorated into one of three economic ‘red zones’ marked by a significant negative shift of sales tax and emergence of economic grayfields.”<sup>55</sup> Thus, the same future could be in store for residents living near the US 281/Loop 1604 interchange.

Alamo RMA must analyze all of these impacts in determining whether or not there is a *likely* substantial impact on the human and natural environment from any proposed project. Clearly, there is.

### *Long-term Impacts*

It is a judicially recognized fact, that “[h]ighways create demand for travel and expansion by their very existence.”<sup>56</sup> The ensuing development is all but foretold.<sup>57</sup> One study concluded that “highway capacity-increasing projects, which are typically a response to current or anticipated increase in travel demand, have coincided with immediate land-development activities.”<sup>58</sup> Another study found a dominant causal influence flowing from highway expansion to population growth.<sup>59</sup> Yet another study substantially confirmed the hypothesis that “road improvements and the resulting swifter

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<sup>53</sup> Kayo Tajima, *New Estimates of the Demand for Urban Green Space: Implications for Valuing the Environmental Benefits of Boston's Big Dig Project*, 25 J. Urb. Aff. 641, 649-51 (2003).

<sup>54</sup> CAMPO Resolution No. 4, at 1 (July 12, 2004).

<sup>55</sup> Email from Brewster McCracken, Austin City Council, to Colin Clark of 7/14/2004, at 1.

<sup>56</sup> *Sierra Club v. United States Dept. of Transp.*, 962 F. Supp. 1037, 1043 (N.D. Ill. 1997); *accord Swain v. Brinegar*, 517 F.2d 766, 777 (7th Cir. 1975) (“highways have a profound influence on population growth, high-density urbanization, industrial expansion, (and) resource exploitation”); *Mullin v. Skinner*, 756 F. Supp. 904, (E.D.N.C. 1990) (“It is an irrefutable reality that the easier it is to get somewhere, the more people will be inspired to do so.”); *City of Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975) (“If the interchange is built, development will occur.”); *Nat'l Wildlife Fed'n v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976) (“Principal among the indirect effects of the highway on the crane is the residential and commercial development that can be expected to result from the construction of the highway.”).

<sup>57</sup> Thomas W. Sanchez, *Land Use and Growth Impacts from Highway Capacity Increases*, J. Urban Planning and Development 75 (June 2004); Robert Cervero, *Road Expansion, Urban Growth, and Induced Travel: A Path Analysis*, 69 APA Journal 145, 156-57 (Spring 2003); Neal R. Peirce, *Expansion Induces Traffic* (reporting that in the five years before I-270 was widened, 1,745 new homes were approved in the 12 miles north of Rockville, the major community on the route, while in the five years after the road was widened, 13,642 new homes were approved).

<sup>58</sup> Sanchez, *supra* note 57, at 81.

<sup>59</sup> Paul R. Voss and Guangqing Chi, *Highways and Population Change*, 71 Rural Sociology 33 (2006).

travel speeds spur building activities along a corridor.”<sup>60</sup> The bottom line is that new homes, offices, and retail stores appear near improved freeways within two to four years after construction.<sup>61</sup> This is not new. Back in 1975, one study demonstrated that proximity to a controlled access highway enhanced population growth in Pennsylvania.<sup>62</sup>

Federal regulations require Alamo RMA to analyze the impacts of induced growth,<sup>63</sup> which will be significant given that this growth specifically overlies karst zones 1 and 2 identified by Veni,<sup>64</sup> in the northwest quadrant of the San Antonio. Karst zone 1 includes areas where endangered karst invertebrate species are known to exist; karst zone 2 includes areas where there is a high probability of those species being present. Thus, the urbanization resulting from and serviced by the improvements to the US 281/Loop 1604 interchange *will* impact the nine endangered karst species through the loss of permeable cover; contamination from septic effluent, sewer leaks, run-off, pesticides, and other urban impacts.

It will therefore be a far stretch for Alamo RMA to conclude that these consequences will not have a likely significant impact on the environment, especially given that such consequences have already had significant impacts on the environment. For example, in 1999, a motorist backed into a gasoline pump at a Texaco station located along US 281, several miles into the recharge zone.<sup>65</sup> Though only a few gallons spilled from the pump itself, an unnoticed rupture in the line connecting the pump to the underground storage tank leaked an estimated 800 to 900 gallons of gasoline.<sup>66</sup> Within days, the spill contaminated several nearby water wells, all despite the fact that the gasoline station met all codes and environmental regulations.<sup>67</sup>

Thus, Alamo RMA need not speculate about possible likely environmental impacts. Such environmental impacts associated with urban development have already occurred. In fact, in 1988, 28 oil and chemical spills occurred in Bexar County, representing the greatest number of land-based spills in central Texas affecting surface and/or groundwater.<sup>68</sup> Furthermore, through just the first half of 1988, between 26 and 50 underground storage tanks were confirmed to be leaking, placing Bexar County as

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<sup>60</sup> Cervero, *supra* note 57, at 156.

<sup>61</sup> *Id.* at 156-57.

<sup>62</sup> Voss, *supra* note 59, at 34; *see also* Ken Salgat, *Polk Parkway Spurs Development*, Tampa Bay Business Journal, Oct. 6, 2000; Neal R. Peirce, *supra* note 57.

<sup>63</sup> 40 C.F.R. § 1508.8(b). To the extent that Alamo RMA would like to disclaim responsibility for these impacts, they cannot. *See Nat'l Wildlife Fed'n*, 529 F.2d at 374 (“The appellees do control this development to the extent that they control the placement of the highway and interchanges.”).

<sup>64</sup> *See* 65 Fed. Reg. 81,419, 81,430 (Dec. 26, 2000).

<sup>65</sup> Rudolph Bush, *800-Gallon Spill May Pollute Aquifer*, San Antonio Express-News, 7/22/1999, at 1B.

<sup>66</sup> *Id.*

<sup>67</sup> Bush, *supra* note 16, at 3B.

<sup>68</sup> United States Fish and Wildlife Service, *Final Rule to List Nine Bexar County, Texas Invertebrate Species as Endangered*, 65 Fed. Reg. 81,419, 81,425 (Dec. 26, 2000).

second among central Texas counties with underground storage leaks.<sup>69</sup> That was in 1988; “[i]ncreasing urbanization in Bexar County will increase the risk that leaks and spills may harm karst ecosystems.”<sup>70</sup>

The literature also supports the fact that urbanization has significant environmental impacts. Studies have demonstrated that low-density, automobile dependent development is a leading cause of imperviousness.<sup>71</sup> In fact, transportation-related hard surfaces account for over 60% of the total imperviousness in suburban areas.<sup>72</sup> That amount of impervious cover over the Edwards Aquifer Recharge Zone will substantially decrease recharge into the Aquifer and thereby impact water supply. The increased impervious cover will also directly translate into higher peak stormwater discharge rates, greater runoff volumes, and higher floodplain elevations. It has been demonstrated that land-use practices alone can increase Central Texas peak-flood discharges by as much as 300 percent.<sup>73</sup> Given that the area is already prone to flash floods, this is a significant effect.

All told, then, there are substantial, readily foreseeable impacts to any project that extend well beyond the narrow right of way for the road.<sup>74</sup> Alamo RMA cannot turn a blind eye to these impacts to conclude that there is no likely substantial impact to the environment. Alamo RMA must raise its eyes up to the horizon to see the full extent of the environmental impacts of any proposed project. To fail to do so would violate both the letter and the spirit of NEPA and its implementing regulations.

#### *Cumulative Impacts*

All of these impacts just outlined only constitute direct and indirect impacts. Alamo RMA must also consider the cumulative impacts, which consist of all of this project’s direct and indirect impacts in conjunction with other direct and indirect impacts associated with other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other action.<sup>75</sup> Consequently, Alamo RMA must also consider the impacts of other road projects in the region and the subsequent development that will thereby arise.

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<sup>69</sup> *Id.*

<sup>70</sup> *Id.* at 81,426.

<sup>71</sup> Paving Our Way to Water Shortages 8, at <http://www.smartgrowthamerica.org/DroughtSprawlReport09.pdf>.

<sup>72</sup> *Id.*

<sup>73</sup> S. Christopher Caran and Victor R. Baker, *Flooding Along the Balcones Escarpment, Central Texas*, in *The Balcones Escarpment, Central Texas*, 1-14 (Patrick L. Abbott and C.M. Woodruff, Jr., eds., 1986).

<sup>74</sup> See Sanchez, *supra* note 57, at 78 (reporting that on average between 30-40% of “cells,” grid areas 152m on a side, within 1.6km of road improvements get developed).

<sup>75</sup> 40 C.F.R. § 1508.7.

## **ALAMO RMA MUST CONSULT WITH EPA AND FWS**

In conducting its environmental review, Alamo RMA must consult with and seek comment from EPA and Fish and Wildlife Service. The consultation with EPA is pursuant to 42 U.S.C. § 330h-3(e); the Fish and Wildlife consultation is pursuant to 16 U.S.C. § 1536. Absent these consultations, Alamo RMA not only acts contrary to law but loses the insight of such expert agencies.

US 281 Super Street  
Alamo RMA  
1222 North Main Suite 1000  
San Antonio, TX 78212

Via email to [Interchange@AlamoRMA.org](mailto:Interchange@AlamoRMA.org)

Thursday, September 03, 2009

Dear Sirs or Madams,

I am writing to comment on the US 281 x Loop 1604 Interchange. I am opposed to approval of a Categorical Exclusion for this project.

I would note first that the August 25, 2009 Community Open House put on by your organization did not make readily available important information regarding the impact of this project on the surrounding neighborhoods or the Edwards Aquifer.

Most of the Open House was dedicated to promoting transportation benefits, especially reduced drive times, and selling the general public on this project. Video presentations were unhelpful regarding environmental impacts, with only one seeming to address this issue. What I watched of this video consisted of a discussion of Edwards Aquifer geology with no specific information about expected adverse effects, despite this project's location over the vulnerable aquifer recharge zone.

Information on noise and environmental impacts could only be uncovered by questioning ARMA staff and consultants, and one would need to have prior knowledge of these issues in order to ask the right questions. Even then, persistence was required on my part as the consultant was reluctant to provide results of the noise study, offering that the Categorical Exclusion would be made public after its approval.

Nonetheless, I learned that there "might be" noise impacts on the adjacent neighborhood. My neighborhood of Hollywood Park has a number of people living on lots within 400 feet of the proposed elevated lanes on Loop 1604.

Even the low-level but chronic noise of everyday local traffic can cause stress in children and raise blood pressure, heart rates and levels of stress hormones.<sup>1</sup> Long-term exposure to traffic noise may account for approximately 3% of coronary heart disease deaths. The noise threshold for cardiovascular problems was determined to be a chronic nighttime exposure of at least 50 A-weighted decibels, the noise level of light traffic.<sup>2</sup>

Hollywood Park property owners, including some who have lived here for almost 50 years, are being asked to suffer the effects of this huge noisy project for the benefit of non-residents. We get our drinking water from a well about 3 miles south of this interchange, which is entirely located on the recharge zone of the karst aquifer from which the well draws.

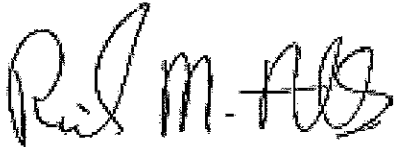
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<sup>1</sup> Journal of the Acoustical Society of America, Vol. 109, March 2001.

<sup>2</sup> Environ Health Perspect. 2007 November; 115(11): A536-A537.

My request is for a full Environmental Impact Statement on this project. Such a requirement is justified by the increased traffic this intersection will experience as a result of the interchange. Currently, many drivers circumvent this intersection by taking alternate routes. This phenomenon has been well documented.<sup>34</sup>

Sincerely,

A handwritten signature in black ink that reads "Richard M. Alles". The signature is written in a cursive, somewhat stylized font.

Richard M. Alles

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<sup>3</sup> *Several issues in play in Hollywood Park council election*, San Antonio Express-News, 4/23/2009

<sup>4</sup> Minutes of Hollywood Park, TX City Council meetings incl. Jan. 17, 2006



## Joelle Sierra

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**From:** Interchange  
**Sent:** Friday, September 04, 2009 7:24 PM  
**To:** Joelle Sierra  
**Cc:** Lisa Adelman  
**Subject:** FW: Comments on US 281/Loop 1604 Interchange  
**Attachments:** Comments.281&1604.interchange.9.4.09.pdf; Attachment 1.pdf; Attachment 2.pdf; Attachment 3.pdf

Add to the comment list on Tuesday

LDA

-----Original Message-----

**From:** Andrew Hawkins [mailto:[andrew@sosalliance.org](mailto:andrew@sosalliance.org)]  
**Sent:** Fri 9/4/2009 5:29 PM  
**To:** Interchange  
**Subject:** Comments on US 281/Loop 1604 Interchange

Dear Alamo RMA,

Please see the attached comments and additional documents incorporated into the comments. These are on behalf of SOS Alliance and AGUA.

Thanks,

Andrew Hawkins  
Staff Attorney  
SOS Alliance