



**Tres Arroyos del Poniente Community Plan
Santa Fe County, New Mexico**

Tres Arroyos del Poniente Community Plan

Santa Fe County, New Mexico

Adopted by the Board of County Commissioners

Resolution 2006 - 41

March 14, 2006

Adopted by the Extraterritorial Zoning Authority

EZA Ordinance 2006 – 02

March 30, 2006

Prepared by:

Tres Arroyos del Poniente Community Planning Committee

Santa Fe County Planning Division

SANTA FE COUNTY

Resolution No. 2006-41

A RESOLUTION AMENDING RESOLUTION 1999-137, THE SANTA FE COUNTY GROWTH MANAGEMENT PLAN, AS AMENDED, TO ADOPT AND INCORPORATE THE TRES ARROYOS DEL PONIENTE COMMUNITY PLAN

WHEREAS, on December 14, 1999 the Board of County Commissioners approved Resolution 1999-158 designating an area bounded by SR 599, the City Of Santa Fe Municipal Recreation Center and the Santa Fe Northwest Contemporary Community boundary as a Contemporary Community; authorizing the Westside Planning Coalition to begin a community planning process; and declaring the Contemporary Community a Critical Planning Area pursuant to Article XIII of the County Land Development Code; and

WHEREAS, The Planning Committee concerns included a recent high growth rate and potential for high future growth, inadequate infrastructure, threatened open space and trails, and deterioration of unique community character; and

WHEREAS, the Planning Committee began by studying the land, vegetation and wildlife in the area and renamed the planning area the Tres Arroyos del Poniente Community based on the most physically prominent features, the three arroyos that traverse the area: the Arroyo Calabasas, the Arroyo Frijoles and the Arroyo de las Trampas; and

WHEREAS, the Planning Committee sought representation from neighborhoods and subdivisions and large vacant properties within the area and worked within a consensus process to develop a vision, goals, and recommended solutions for housing and development density; trails and open space; light water, power and noise; businesses; roads and transportation; land uses and design standards for residential and commercial uses; and

WHEREAS, the Planning Committee held regular meetings open to the public and held two public community wide meetings on March 2 & Sept. 28, 2005 and has made revisions based on community comments and now is presenting a consensus draft Tres Arroyos del Poniente Community Plan as well as proposed changes on which the committee has been unable to reach consensus; and

WHEREAS, the proposed Tres Arroyos del Poniente Community Plan meets the required planning elements in Article XIII of the Land Use Development Code. The Plan will be a tool to support the important values of the community as expressed throughout the planning process, including maintenance of a rural quality of life, support for an appropriate scale and intensity of development, support for a trails and open space network linking to public trails at the perimeter of the community, support of planned commercial areas and small-scale home businesses, and protection of water resources. The Plan also supports the ARTF roads and trails network and the Metro Highway Corridor Plan and Ordinance where it traverses the TAP area; and

SFC CLERK RECORDED 04/06/2006

WHEREAS, the policies of the Tres Arroyos del Poniente Community Plan conform to the overall goals and policies of the Santa Fe County Growth Management Plan (Res. 1999-137) and the Santa Fe Comprehensive Extraterritorial Plan (EZA Ord. 1988-1) and are reflected in the adopted RPA Regional Plan (Res. 2004-125); and

WHEREAS, the County Development Review Committee recommended approval of the Tres Arroyos del Poniente Community Plan with amendments on December 15, 2005; and

WHEREAS, the status of community, neighborhood, and district plans is advisory only and is to be used as a guideline for the review and approval of zoning changes or ordinance amendments, acceptance of public dedications, or capital improvements programming.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Santa Fe County that:

1. The Tres Arroyos del Poniente Community Plan, attached as Exhibit A to this Resolution, is hereby adopted; and
2. Resolution 1999-137, the Santa Fe County Growth Management Plan, is hereby amended to incorporate The Tres Arroyos del Poniente Community Plan.

PASSED, APPROVED AND ADOPTED this *14* day of *March*, 2006.

BOARD OF COUNTY COMMISSIONERS



[Signature]
Harry B. Montoya, Chairman



ATTEST:

[Signature]
Valerie Espinoza, County Clerk

COUNTY OF SANTA FE)
STATE OF NEW MEXICO) ss

BCC RESOLUTIONS
PAGES: **80**

I Hereby Certify That This Instrument Was Filed for Record On The 6TH Day Of April, A.D., 2006 at 11:05 And Was Duly Recorded as Instrument # 1427641 Of The Records Of Santa Fe County

[Signature]
Deputy _____
Witness My Hand And Seal Of Office
Valerie Espinoza
County Clerk, Santa Fe, NM

Approved As To Form:

[Signature]
Stephen C. Ross, County Attorney

SFC CLERK RECORDED 04/06/2006

1
2 **SANTA FE EXTRATERRITORIAL**
3 **ZONING AUTHORITY**

4 *Ordinance No. 2006 - 02*
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8 **AN ORDINANCE AMENDING EZA ORDINANCE 1988-1, THE SANTA FE**
9 **COMPREHENSIVE EXTRATERRITORIAL PLAN, TO INCORPORATE THE TRES**
10 **ARROYOS DEL PONIENTE COMMUNITY PLAN IN SECTION V.**
11

12
13 **BE IT ORDAINED BY THE EXTRATERRITORIAL ZONING AUTHORITY OF THE**
14 **CITY AND COUNTY OF SANTA FE THAT THE EXTRATERRITORIAL ZONING**
15 **ORDINANCE BE AMENDED AS FOLLOWS:**

16 WHEREAS, on November 30, 1999 the Santa Fe Extraterritorial Zoning
17 Authority approved a request to authorize the Westside Planning Coalition to begin community
18 planning for an area bounded by SR 599, the City of Santa Fe Municipal Recreation Center and
19 the Santa Fe Northwest Contemporary Community boundary; and

20 WHEREAS, the Planning Committee concerns included a recent high growth rate and
21 potential for high future growth, inadequate infrastructure, threatened open space and trails, and
22 deterioration of unique community character; and

23 WHEREAS, the Planning Committee began by studying the land, vegetation and wildlife
24 in the area and renamed the planning area the Tres Arroyos del Poniente Community based on the
25 most physically prominent features, the three arroyos that traverse the area: the Arroyo Calabasas,
26 the Arroyo Frijoles and the Arroyo de las Trampas; and

27 WHEREAS, the Planning Committee sought representation from neighborhoods and
28 subdivisions and large vacant properties within the area and worked within a consensus process
29 to develop a vision, goals, and recommended solutions for housing and development density;
30 trails and open space; light water, power and noise; businesses; roads and transportation; land
31 uses and design standards for residential and commercial uses; and

32 WHEREAS, the Planning Committee held regular meetings open to the public and held
33 two public community wide meetings on March 2 & Sept 28, 2005 and has made revisions based
34 on community comments and now is presenting a consensus draft Tres Arroyos del Poniente
35 Community Plan as well as proposed changes on which the committee has been unable to reach
36 consensus; and

37 WHEREAS, the Plan will be a tool to support the important values of the community as
38 expressed throughout the planning process, including maintenance of a rural quality of life,
39 support for an appropriate scale and intensity of development, support for a trails and open space
40 network linking to public trails at the perimeter of the community, support of planned commercial
41 areas and small-scale home businesses, and protection of water resources. The Plan also supports

SEC CLERK RECORDED 04/12/2006

1 the ARTF roads and trails network and the Metro Highway Corridor Plan and Ordinance where it
2 traverses the TAP area; and

3 WHEREAS, The Santa Fe Comprehensive Extraterritorial Plan adopted by both the City
4 Council and the Board of County Commissioners provides for the preparation and adoption of
5 community, neighborhood and sector plans and a portion of the Tres Arroyos del Poniente
6 planning area lies within the Extraterritorial Zoning District; and

7 WHEREAS, the policies of the Tres Arroyos del Poniente Community Plan conform to the
8 overall goals and policies of the Santa Fe County Growth Management Plan (Res. 1999-137) and
9 the Santa Fe Comprehensive Extraterritorial Plan (EZA Ord. 1988-1) and are reflected in the
10 adopted RPA Regional Plan (Res. 2004-125); and

11 WHEREAS, the Extraterritorial Zoning Commission recommended approval of the Tres
12 Arroyos del Poniente Community Plan on January 12, 2006 and the Board of County
13 Commissioners approved Resolution 2006- 41, adopting the Tres Arroyos del Poniente
14 Community Plan with amendments, as an amendment to the Santa Fe County Growth
15 Management Plan on March 14, 2006; and

16 WHEREAS, the status of community, neighborhood, and district plans is advisory only
17 and is to be used as a guideline for the review and approval of zoning changes or ordinance
18 amendments, acceptance of public dedications, or capital improvements programming.

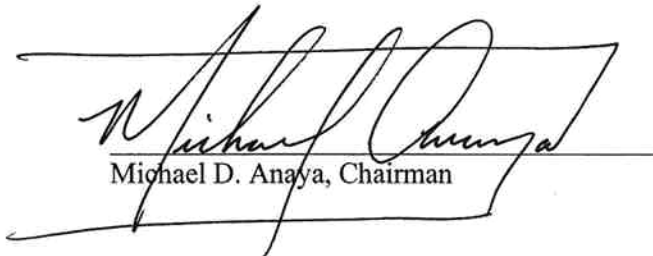
19 NOW, THEREFORE, BE IT RESOLVED by the Extraterritorial Zoning Authority of the
20 City and County of Santa Fe that:

- 21
22 1. The Tres Arroyos del Poniente Community Plan, attached as Exhibit A to this ordinance,
23 is hereby adopted; and
24
25 2. Ordinance 1988-1, The Santa Fe Comprehensive Extraterritorial Plan, is hereby amended
26 to incorporate The Tres Arroyos Del Poniente Community Plan in Section V.
27

28 Severability

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30 If any part of this Ordinance or the application thereof to any person or circumstance is
31 held invalid, the remainder of the Ordinance and its application to other persons or
32 circumstances shall not be affected thereby.
33
34
35

36 **PASSED, ADOPTED AND APPROVED** this 30th day of MARCH, 2006, by the Santa Fe
37 Extraterritorial Zoning Authority.
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Michael D. Anaya, Chairman

SPC CLERK RECORDED 04/12/2006

I Hereby Certify That This Instrument Was Filed for
Record On The 12TH Day Of April, A.D., 2006 at 10:03
And Was Duly Recorded as Instrument # 1428419
Of The Records Of Santa Fe County

Deputy Marcella [Signature] Witness My Hand And Seal Of Office
Valerie Espinoza
County Clerk, Santa Fe, NM



ATTEST:

Valerie Espinoza
Valerie Espinoza, County Clerk

APPROVED AS TO FORM:

Stephen C. Ross
Stephen C. Ross, County Attorney

CERTIFICATE OF FILING

Tina Dominguez
I, ~~Yolanda Y Vigil~~ City Clerk, do hereby certify that the foregoing ordinance, designated as EZ
Ordinance, No. 2006 - 02, was filed in my office on the 12 day of April, 2006.



SANTA FE CITY CLERK

Tina Dominguez
~~YOLANDA Y VIGIL~~
TINA DOMINGUEZ

CERTIFICATE OF FILING

I, Valerie Espinoza, County Clerk, do hereby certify that the foregoing ordinance, designated as
EZ Ordinance, No. 2006 - 02, was filed in my office on the 12 day of April, 2006, in
Instrument Number 1428419



SANTA FE COUNTY CLERK

Valerie Espinoza
VALERIE ESPINOZA

SFC CLERK RECORDED 04/12/2006

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Planning Committee Participants

Organizing Committee Members:

Seguna Severson (Pinon Hills)
Tom Terwilliger (al lado de Puesta del Sol)
Arthur Fields (Frijoles Village)
Leslie Dierauf (Sierra Azul)
Paul Singdahlson (Sierra Azul)
Steve Bone (Sierra Azul)
Debbie Romero (Puesta del Sol)
Michael Hurlocker (developer)
Bertha Crocker
Adrienne Arias/Peter Heitzberg (Pinon Hills)
David Munger (Puesta del Sol)
Chris Leibman (Sierra Azul)
Bill Chapman (developer)

Additional participating members:

Stock Colt (Puesta del Sol)	Phil Shafer
Ann Noble (Puesta del Sol)	Phillip Garu
David Romero (Pinon Hills)	Thomas Macken
Phyllis Baca (Baca Ranch)	Joseph Mack
Phil Baca (Baca Ranch)	Zella Kay Cox
Matthew Baca (Baca Ranch)	Rhonda King
Mike Baca (Baca Ranch)	Linda MacIntyre (State Land Office)
Mark Baca (Baca Ranch)	Ernestine Hagman (Alameda Ranchettes)
Hazel Mack (Puesta del Sol)	Dave Gold (Pinon Hills)
Al Lilly, Scott Hoeft, Erin Sanford (Santa Fe Planning Group/Suerte del Sur)	Al Moellenbeck
David G. Noble (Pinon Hills)	Blackie de Groot
Nora Gallagher	Carol Hamption
Jan Colt	Ed Rivera (Pinon Hills)
Helga Ancona	Elizabeth Wiseman
Clem Gunn	George Menking
Karen Wenning (public schools)	George Utley
Hanette Joffe	Geraldine Gurule
Dotty Davis	Ginny Tape
	Gretchen Garner
	Jim Tape

John Flax
John Hulbert
John Porter
John Sterrett
John Wallace
Krista Elrick
Lawrence Renner
Zana Renner
Linda Trujillo
Manuel Trujillo
Mike Keleher
Robert Williams
Ruth Noble (Pinon Hills)
Susan Menking
Tom Leatherwood

Community Meeting Attendees:

John Hansen (La Vida)
Hank Tice (La Vida)
Jere Turner
Margaret Sargent
Chris Sargent
Jane Gabaldon (Pinon Hills)
Max Baca
Jerry Porter
Steve Ortega (Pinon Hills)
Betty & Ray Kersting (La Mirada)
Robert Romero
Jay Frey (la Mirada)
John Blanchard (Sierra Azul)
Bill Barr (Tierra del Oro)
Hill Kissell (Tierra del Oro)
Cathy Morlock (Puesta del sol)
Greg Elbring) Puesta del Sol)
Roy McKeag (Pinon Hills)
Paul Casaus
Marco Werkhoven (Pinon Hills)
Irene Werkhoven

Mark Williams (Sierra Azul)
Anne Probst (Pinon Hills)
Gary Probst (Pinon Hills)
Sophia Gurule (Pinon Hills)
Toby Lovato
Tim Monaco (Pinon Hills)
Paul Duran (Archdiocese of Santa Fe)
Michael Wiese (Pinon Hills)
Tim King (Sierra Azul)
Liz King
Stephen Etre (Puesta del Sol)
John Gallegos (Pinon Hills)
Tiffany Gallegos
Dennis Ortiz
Gloria Gurule
Harry Turner
Cynthia Rank-Ballas
Frank Kunk (Aldea)
Bob Kreger (Sierra Azul)
Jim Cunningham

County Staff Support

Judy McGowan, Senior Planner
Beth Mills, GIS Planner
Sarah Ijadi, Community Planner

Photos

David Grant Noble

I. VISION STATEMENT

“This plan reflects the wishes and desires of the people who reside, own property, and conduct business in the Tres Arroyos del Poniente area. The plan reflects the diversity of interests, and values the social connections and uniqueness of the area. The plan seeks to protect our open spaces and water resources for future generations. The plan integrates diversified housing and economic development, and pays particular emphasis to neighborliness and benefit to local residents. Although we recognize that with growth comes an increase in traffic and congestion, this plan seeks to allow development in such a way as to preserve the rural character of the area.”

II. THE TRES ARROYOS DEL PONIENTE PLANNING AREA

The TAP planning area is west of the City of Santa Fe within Santa Fe County, New Mexico. It is the region bounded on the south by NM 599, on the north and west by the Santa Fe Northwest sector (SNAC) sector planning area, and on the west by the Santa Fe Municipal Recreation Area. The planning area consists of approximately 4478 acres, and includes the existing and developing communities of Pinon Hills, Alameda Ranchettes, Puesta del Sol, Sierra Azul, Aldea de Santa Fe, as well as approximately 2900 acres of undeveloped land. The three arroyos from which the name comes are the Arroyo Calabasas, the Arroyo de las Trampas, and the Arroyo de los Frijoles.

A. TAP early history

Archaeological research has revealed that the Tres Arroyos del Poniente area and its environs were first occupied some 8,000 years ago, during the Early Archaic period, by small groups of hunter-gathers. Research on one site along NM 599 produced dates of between 5,260 and 5040 B.C. The Middle Archaic (3300-1800 BC) is not well represented in the archaeological record in the Santa Fe area; however, one site (LA86139) recently excavated in nearby Las Campanas indicates the presence of mobile people in that period. Between 1800 B.C. and A.D. 800, small semi-nomadic forager bands occupied what is now the Tres Arroyos del Poniente sector to harvest such products as grass seeds and piñon nuts and to hunt rabbits and other small game. The sites they left behind include shallow pit houses and roasting ovens, as well as tool manufacturing and food-processing areas. They appear to have occupied the same camps seasonally for short periods over a long span of time. In some cases, they probably also used these sites as base camps from which to conduct hunting and foraging forays in the higher elevations of the piñon-juniper piedmont to the east.

Agriculture made its appearance here later than in most other parts of the Southwest and it was not until the A.D. 800s that people came to rely significantly on corn and other domesticates for their subsistence. Pindi Pueblo (LA 1, excavated in 1933), located on the north side of the Santa Fe River in the village of Agua Fria, was founded in the late Developmental period (circa A. D. 1000-1200), as were several other Pueblo sites farther downstream. The village thrived until the mid-1300s, depending heavily on farming corn, beans, and squash along the river, raising turkeys, and hunting and gathering in the piñon-juniper-grassland piedmont to the north. Their resource collecting would have included the Tres Arroyos del Poniente area. An even larger pueblo, the Agua Fria Schoolhouse site, was situated across the river from Pindi (at the junction of present-day Agua Fria Street and San Ysidro Crossing). It was contemporaneous with Pindi but continued to be occupied until 1420. La Cienega Pueblo, farther south, continued to be occupied until 1680. The inhabitants of these surrounding pueblos are believed to have utilized the piedmont to the north and east of them, including the Tres Arroyos area, as a “commons” for resource gathering.

After A.D. 1420, the eastern Santa Fe River valley was abandoned by its Native American inhabitants. It remained unoccupied until the arrival of Spanish colonists and their Mexican Indian guides and servants in 1609-1610, when La Villa de Santa Fe was founded. Spanish colonists soon established farmsteads along the Santa Fe River, utilizing surrounding areas for stock grazing and gathering fuel wood. These activities continued well into the twentieth century.

B. TAP recent history

In the early 1900's, under the provisions of the Homestead Act designated to stimulate settlement in the west, the privatization of the land in the TAP vicinity began. The Montoya, Rivera, Romero, Lopez, Ross, and Ferguson Families (along the Calabasas and Frijoles Arroyos) and the Delgado, Carrillo, and Lopez Families (on land between 599 and county road 62) had an impact by settling and making improvements on the land varying from small parcels up to 640 acres.

The following excerpts are taken from a copy of "Final Proof - Testimony of Witness", dated May 22, 1926, found at the Smithsonian Institute in Washington D.C. in the file of Abelino Rivera who once homesteaded land now owned by the Baca family:

"Improvements

House, 1 room \$145.00

fence, 3 miles, 3 wires \$480.00

fecne [sic] enclosing cultivated land \$160.00

earth tank \$ 75.00

corral \$ 60.00

a total of about 35 acres in corn and beans

he has grazed about 15 head of stock"

In the 1990's two BLM Land trades (King Brothers) added within the TAP area approximately 800 acres of private land to the west and a section of private land to the north of Pinion Hills. With these trades and the acquisition of over 2000 additional acres of BLM and private land by the city and county for the landfill and Major Road Projects created pressure for development of the TAP area. Grazing still continues to be the main use of the western part of the TAP planning area. Several large areas within the TAP region have been developed since the 1960's, including the Pinon Hills subdivision and the Puesta del Sol subdivision.

III. RATIONALE AND STRATEGY FOR TRES ARROYOS DEL PONIENTE COMMUNITY PLANNING

A. Rationale for a plan

The TAP planning area is undergoing a period of rapid development. In 2002 about 25% of the planning area was fully developed, and an additional 10% of the entire area was in various stages of development planning or construction. Many residents of the area have come to the TAP area because of the open, quiet, and relatively undeveloped nature of western Santa Fe County and their desire to preserve some elements of the area. In addition, some residents and landowners wished to participate in the expansion of the housing in Santa Fe by developing their properties. Others have owned property in the area for many years and wish to continue agricultural uses of the land. Consequently, the short-term goals of various segments of the community in the TAP region are not entirely compatible.

A Community Plan for the TAP area has the potential for focusing some attention on the aspects of long-term planning that are consistent with the goals of most members of the community, including long-term residents, those seeking to develop properties, and others. Though each member of the community has his or her own individual goals, it is the premise of a Community plan such as this one that there are some goals that are widely shared.

B. Strategy for the plan

The strategy for this Community Plan is to attempt to identify shared goals and wishes of members of the TAP area through the Community Survey, then to set out a long-term plan that focuses on these shared goals. This strategy has underscored development of the plan.

It is recognized that some important issues are not readily addressed in a plan at this stage of development. Issues such as water availability are better addressed at the level of the County General Plan or at a Regional Planning level, since their applications are much broader than just the TAP area.

IV. BACKGROUND AND MANDATE

A. Tres Arroyos del Poniente Planning Aug. 1998 - Dec. 1999

Members of the TAP community began meeting to discuss the possibility of developing a Community Plan in August, 1998. The group called themselves at the time the West Side Planning Coalition. After considering the diversity of the planning area, a Planning Committee was formed to represent residents, property owners and developers.

Four principal issues and concerns in our community area were identified during early stages of the planning process. These were:

- Expected significant residential and commercial development that will change the character of the community
- Loss of open space and its associated native plants and animals that define much of the West Side landscape
- Inability of the existing and planned infrastructure to fully support this potential development
- The community's desire to have thoughtfully placed and constructed road and trail systems that consider quality of life issues.

The Planning Committee held 7 publicly announced meetings in preparation for beginning the formal planning process, including an "Open House" meeting July 19, 1999 that was announced in a mailing to all landowners of record in the proposed planning area and was attended by 30 community members. Preliminary information on the concerns of community members was gathered through a survey included with the July 19 announcement.

The boundaries of the planning area were defined based on major existing boundaries and by the presence of existing planning areas adjacent to the area. Some areas that might logically have been included in the planning area were already part of the Santa Fe Northwest Sector Planning area, for example. These include the La Serena subdivision and the lands between the proposed West Side planning area and the City of Santa Fe Recreation Center. Additionally, the area immediately to the South of the planning area included the Village planning district.

B. Proposal to plan and Authorization to Plan Dec. 1999

The members of the Planning Committee wrote a proposal to the Santa Fe County Board of Commissioners and the Extraterritorial Zoning Authority documenting the need for community planning in this area, the progress of the committee, and requesting authorization under the Santa Fe County Ordinance Number 1998-5 to begin the community planning process. By December, 1999, the County Development Review Commissioners, Board of County Commissioners, the Extraterritorial Zoning

Commission, and the Extraterritorial Zoning Authority had all approved the proposal to plan and the formal part of the planning process was begun.

V. SUMMARY OF THE TRES ARROYOS DEL PONIENTE COMMUNITY PLANNING PROCESS

A. Planning Committee

A Planning Committee of 15 people from the planning area was approved by the County and EZA at the time of the approval to plan. The membership of the committee has changed somewhat during the planning process (see Planning Committee Participants). The operating principle of the committee was that anyone who wished to put in the necessary effort could be a member of the Committee. The Planning Committee met monthly, for a total of 45 meetings: 10 meetings in 2000, 9 in 2001, 7 in 2002, 7 in 2003, 7 in 2004, and 5 in 2005. Additionally, individual members worked on sections of the plan on their own.

B. Related Community Plans

The Planning Committee considered the community plans from the Santa Fe Northwest Sector and of Los Cerrillos, Tesuque, Arroyo Hondo, La Cienega, Madrid, Canada de los Alamos, as well as the report of the Arterial Roads Task Force on future road plans. The committee noted that the plans have generally developed around ideas that are specific to each area.

C. Public meetings

All the meetings of the Planning committee were open to the public and were announced via email and telephone to interested community members. Three community-wide meetings were held, with notice mailed to all property owners, one at the beginning of the planning process and two to review the draft plan before submitting it for County review.

D. Surveys

An in-depth community survey was carried out by mail in March of 2001. A total of 356 surveys were mailed out based on the Santa Fe County property ownership records. Of these, a total of 101 surveys (28%) were completed and returned (see analysis below and Appendix D for complete results of the survey).

E. Public input on the Plan

The public was informed of the draft plan through a web site, email notifications, and public meetings announced through mailings to property owners, signs on roads in the area, and email and phone listings.



VI. ANALYSIS OF ISSUES

A. Resident and property owner survey

A comprehensive resident and property owner survey was carried out in March, 2001. The survey contained 74 multiple-choice questions on roads, water, land use, community character/quality of life, commercial development, and environment. The survey had space for general comments in each of these areas as well. The respondents comprised residents in nearly all areas of the TAP and included owners of both large (500 acres) and small (2.5 acre or less) properties and residents of established developments such as Puesta del Sol and of areas not yet extensively developed. The results were tabulated as percentages of responses.

Many of the questions address zoning regulations that differentially affect large and small landowners, so that small percentages of respondents disagreeing with a majority may be important to consider.

The responses to the survey (see Appendix B for complete results) were consistent with the expectation that some issues would have far more consensus than others, and that there would not be complete agreement on any individual issues. Nevertheless some very strong consensus and opportunity to find agreement was clear in several areas.

Quality of life in the TAP

The general comments of respondents on quality of life in the TAP were particularly uniform. In response to "What are the two best aspects of the day-to-day life in the TAP", the words, "quiet", "rural", "beauty", "views", or "open space" appeared in 73 of 81 responses, and 6 of the remaining 8 used words such as "seclusion", "hiking", "privacy", or "space".



Most of the responses to multiple-choice questions in the survey were consistent with this general response on quality of life. For example, some 92% of respondents agreed with the statement "Maintaining the rural character of this area is important to me" and 93% agreed with the statement, "Preserving open space is necessary to maintaining the area's rural character". Further, 79% agreed with "Hiking, biking and/or horseback riding on the area's trails is an important recreational activity for me".

Growth in the TAP

The responses to the survey showed a somewhat mixed view of the best approach towards growth in the TAP. About half (48%) felt that it was appropriate to implement policies to discourage growth, and most of the rest (42%) felt that policies should neither encourage nor discourage it. Similarly, about half (51%) felt that their area of the TAP was growing too much and most of the others (47%) felt that it was growing about right.

Responses suggesting specific elements for the plan

Several of the responses to questions on the survey suggest specific elements for the community plan. For example, the majority of respondents (78%) felt that new developments should include affordable housing in at least 10-15% of units. In another area of strong agreement, 74% of respondents agreed and only 3% disagreed with the statement "I would like to see the county allow (and encourage) me to collect and re-use gray water in my yard". Similarly, 86% agreed and 6% disagreed with "Land use restrictions (such as zoning ordinances) are a good means of protecting natural resources". Other very strongly supported statements relating directly to elements of a plan include:

- Land use restrictions make the TAP a better place to live. (84% agree, 6% disagree)
- Future growth should coincide with the provision of adequate public services (e.g. safe community-wide drinking water, sewage systems, traffic management, schools, and public safety). (89% agree, 10% disagree)
- Should property owners willing to grant trails easements for public use be compensated? (78% agree)
- Non-community based commercial/retail should be allowed in the TAP. (89% disagree)
- Light industry (such as electronics assembly, or other non-smokestack plants) should be included in the TAP (84% disagree)
- All business buildings should be regulated by design standards such as building height, setbacks, color, architecture, signage, lighting, etc. (91% agree)
- I support large mixed use developments (residences, multi-family, and more than 4 commercial structures organized to support the development's and surrounding community support services). (82% disagree)
- Restrictions on the glare (brightness) of outdoor lights, yard lights, and security lights are important to me. (83% agree)
- All new, and some existing roads, should have hiking, biking and horse trails built safely in or near the road edge. (86% agree)

The respondents were strongly in favor of local land use authority review of divisions of land for non-family-transfers (84% agree, 8% disagree) and only slightly less in favor for family transfers (75% agree, 14% disagree)

Mixed views of zoning regulations

Other responses showed a mixed view toward potential zoning regulations. For example, only about half (49%) of respondents would "allow for smaller residential lots in exchange for more open space within new subdivisions", and fully 36% disagreed with this proposal. Similarly, while home businesses that will not generate traffic within the TAP were generally supported (76% agree), home businesses that might generate traffic resulted in mixed responses (23% agree, 23% neutral, 52% disagree). Additionally, responses were partially mixed for a question asking where commercial activities that are part of the TAP but not located in homes should be located. More than half (62%) responded "In community (village) areas", and 28% responded "Along the bypass (Hwy 599)". A question on small mixed use developments resulted in very mixed support, with 32% supporting them, 16% neutral, and 51% opposing them. The statement "I would object to any development anywhere within the TAP that would interfere with the rural character of our community," received approval from 78% of respondents, but there were many (16%) that disagreed with it. Construction of buildings visible on hilltop or ridge-top areas received mixed responses (68% disapprove, 15% neutral, 17% approve).

Trails

Responses showed willingness on many residents' part to help provide for trail easements, but less willingness to help with open space. About half (47%) of respondents said that they were willing to donate land, money, or easements for trails. The planning committee felt that with encouragement, an even higher percentage might be willing to participate in trails easements. However, just 26% said that they were willing to do the same for community open space areas.

B. Analysis of land use and proposed land use, topographical maps

Relationship to the rest of Santa Fe County

The TAP planning area is to the west of the city of Santa Fe 3-5 miles from the center of the city. To the north are major developments including Las Campanas, to the west of the planning area are small developments and the City Recreation Center, and to the south and east are the traditional area of Agua Fria, the Southwest Santa Fe planning area, and the City of Santa Fe. Residents of the TAP drive frequently to Santa Fe for shopping, work, and recreation. These trips typically require passing through Agua Fria Village, or following the bypass (SR 599) around the north end of Santa Fe. The bypass also provides routes to the north (Los Alamos, Espanola, Taos, Colorado) and south (Albuquerque).

The TAP area has substantial recreation opportunities including many trails and arroyos. All are on privately-owned land. These are used predominantly by residents of the TAP, but also by some residents of other areas. The TAP is not a significant work or

commercial destination for residents from other areas of the County. The open nature of the TAP provides a substantial visual benefit to the rest of the County, from those who drive along the main roads to those who live in Santa Fe. The trails and arroyos provide the possibility of scenic loop trails that could be used by many people from around the County.

Community facilities and institutional uses

The TAP, with a current population of less than 1000 in an area of 7 square miles, is very low in population density. As the community develops there will be advantages to having one or more community centers that allow the residents some focus and a place to meet, and to have a small amount of commercial space for local needs. The Aldea de Santa Fe development in the eastern portion of the TAP, for example, will help to meet these needs, through a plaza and community center. The Aldea de Santa Fe and the Village Plaza commercial areas under development will provide some small-scale commercial potential. As the community develops further there may be the need for schools, post offices, and fire houses, though these needs are adequately addressed for the near future by existing public schools, the downtown post offices, and the Agua Fria fire house.

Local housing and economy

The predominant development pattern in the TAP at present consists of well-separated single-family houses on parcels of land of 1 to 20 acres. Many residents have home-based occupations. There are some small businesses, ranging from wood products to auto repair to trail riding.

Because population in the area is small, data on household income, housing value, place of work and other socioeconomic variables from the Census long form is suppressed for privacy reasons. In general it can be said that there has been a wide range of income levels and housing values in TAP from very low to very high, but that land values and housing costs are rising rapidly.

The land and housing costs in the area are substantial and there is only a small amount of housing classified as affordable. The Aldea de Santa Fe development plans to provide a substantial number of affordable housing units, and additional affordable housing would be advantageous to the community.

Growth

Census 2000 counted 218 dwelling units with a population of 541 in the TAP area.



The area is projected to grow to over 3100 persons and 1370 dwellings by 2020. (based on Most Likely scenario of the Santa Fe County Regional Population and Housing Projections 2002-2050, Al Pitts, 2003 and analysis of build out rates) It is likely to develop at a faster rate than other areas on the west side of Santa Fe because significant platting has already occurred.

Neighborhoods

The major neighborhoods existing within the planning area in 2002 included Pinon Hills and the adjacent Alameda Ranchettes, Puesta del Sol and the adjacent al lado de Puesta del Sol, Sierra Azul, the North Horizon Lane and Camino Don Fidel area, and the area along Blue Canyon Way. These developed neighborhoods comprise a total of approximately 1360 acres of the 4466 acres in the planning area. Some of these neighborhoods developed as rural residential long before construction of the Bypass opened up access to the area.

Developments

The rate of platting and development has increased since the mid 1990's with the approval of a number of new large lot developments and of the Aldea de Santa Fe village. There are several existing and proposed major developments in the planning area. Areas under active development include the Aldea de Santa Fe, La Mirada, La Vida, Tesslera, Tierra Grande, and Tierra de la Vida subdivisions. These subdivisions comprise approximately 725 acres, including dedicated open space.

The remainder of the planning area (approximately 2370 acres, or 53 %) was largely undeveloped as of 2004. These lands include 408 acres owned by the State Land Office. Since 2004 a 660 acre development, Suerte del Sur, has been proposed north of Pinon Hills.

Land use

The land use in the TAP is mixed. The bulk of the area is undeveloped, many of these areas are used recreationally by horse riders, hikers and bikers. Other undeveloped areas, including the Baca property in the Northwest corner of the planning area, have been historically used for grazing. Of the developed areas, most of the land use is residential. There is a substantial amount of home business in the area. Residents estimate that as many as 25% of the homes in the major developments such as Pinon Hills and Puesta del Sol are the base for a home business. The new development Aldea de Santa Fe actively encourages home businesses. Most of these home businesses attract little or no additional traffic and their major effect on the neighborhoods is that residents do not have to commute to work. A few larger-scale businesses are located in the TAP. These include a sawmill/lumberyard in the Southeast corner of the TAP and a car repair business near SR599 in the middle of the TAP.

Land not suitable for development

There is a substantial acreage of land in the TAP that is not suitable for development, and almost all of this land is within the flood plains of the major arroyos (Arroyo Calabasas, Arroyo Frijoles, Arroyo de las Trampas). These arroyos all have some regions where the banks are steep and the flood plain is narrow, and other areas where the flood plains are hundreds of yards wide.



Commercial areas

There is one substantial commercial area planned in the TAP, this is the commercial center of Aldea de Santa Fe. This area is proposed to include over 3 acres of lots in which commercial buildings are located. The commercial area is to include at least 100,000 square feet of office and retail space and is adjacent to the village plaza. Another 10 acres is planned for institutional uses. Given the low density of development in the TAP and the proximity of major shopping areas in Santa Fe, it seems likely that this commercial area will saturate the needs of residents of most or all the TAP for local shopping and for local office space.

There is also a commercial area planned in a location adjacent to the TAP. This is Village Plaza, planned to be near the intersection of SR599 and CR62, on the South side of SR599. This commercial area is also to include office and retail space, and along with the Aldea commercial area, is likely to complete the needs of residents in the TAP for local shopping and office space.

The State Land Office owns two substantial properties in the TAP region. One is in the southwestern region of the TAP planning area, just south of Pinon Hills. There are no current plans for development of this property. The other is to the SW of the TAP planning area along the Santa Fe River, and there are plans for development of this area including small-scale commercial and residential units.

Open space

Although most of the TAP is undeveloped as of 2004, most of the land in the area currently could be developed. As of 2004 the designated open space consists of 290 acres platted or approved in the Aldea de Santa Fe, Tessera and La Mirada developments. As of 2004 there is no County-owned land in the TAP. The County of Santa Fe has a program for acquisition and dedication of open space that could potentially be used in the TAP to preserve some of the open space that exists at present. Particularly important areas of the TAP to preserve include the major arroyos (Arroyo Calabasas, Arroyo

Frijoles, Arroyo de las Trampas) and the parts of the TAP where major trail systems could be placed (along these arroyos and north/south in the central part of the TAP between Pinon Hills and Puesta del Sol).

Zoning

The area within the TAP is mostly governed by the County Land Development Code for zoning. Most of the area is between the 2 and 5-mile boundaries; some is within the 2-mile boundary governed by the Extraterritorial Zoning Ordinance. At present the allowable land use is largely determined by water availability. Basin hydrologic zone (2.5 acre lots with water conservation) is the predominant zoning. Within the 2 mile EZ, developers may increase density in exchange for dedicating open space. Developments over 24 units require imported water and water rights; smaller developments can use local wells.

C. Traffic analysis

The Santa Fe Urban and Extraterritorial Future Roads Plan, developed by the Arterial Roads Task Force (ARTF) and adopted in 1999, considered needs for roads and impacts of roads in the area. The ARTF plan has several specific recommendations for the TAP planning area. The ARTF considered "arterial roads" to be roads with 2 lanes, normally associated with trails or bike paths (i.e., not major roads). The key recommendations consisted of four arterial roads that were considered needed to address the area transportation needs before significant build-out occurs in the region. The recommendations also included the alignments of these roads. The roads are: La Vida Road, from Los Suenos trail to Queen Isabella Way, Los Suenos Trail, from Camino las Campanas to CR70, Queen Isabella Way, from SR599 N. Frontage Road to La Vida Road, and Road "K", from Los Suenos Trail to Caja del Rio Road. These arterial roads were considered sufficient to support the area needs, given the assumption of one house per 2.5 acres, on average.

Changes in demographics since the ARTF report.

The ARTF report is based on the assumption that the average density of housing in the TAP region would be 1 house per 2.5 acres. This means that the road system is designed for an overall average low-density development pattern and that higher overall average densities should be only included with considerable discussion and might require a redesign of the road plan. In particular, local density increases might necessitate road or intersection improvements as well as a reevaluation of overall traffic network, not just roads near the source of increased traffic.

The ARTF Future Roads Plan Tmodel analysis projected a "maximum plausible" population of 4,789 in 2020 for the Tres Arroyos Planning Area. The Most Likely projection of 3,100 population in 2020 is well within the bounds of the ARTF maximum

population of 4789, but congestion could result if not all the modeled roads are constructed or if population or commercial uses are concentrated in a different pattern than expected by the ARTF Plan.

Survey comments on the ARTF report.

The community survey contained two questions about the ARTF report. The first asked if the respondent was aware of the plan, to which 35 responded "yes"; the second asked if the respondent supported the plan, to which 25 responded "yes" and 10 "no". This community plan will be distributed by mail and the internet to community members and will help inform them of the ARTF and other plans.

D. Water issues

The community survey contained several questions about water use and quality. Residents strongly felt that future growth should be matched with community-wide drinking water. Residents felt that it is important to allow the re-use of gray water to minimize total water use. An important water issue is whether or not there is adequate water in the aquifer for additional wells to be built without mining the aquifer. At this time there is inadequate monitoring of the aquifer to determine the extent of water mining. The County Utilities Department has a water distribution system originating with water from the Rio Grande and the Buckman wells. Approximately 1600 acres of the TAP is within the Water Service Area of Santa Fe County and can potentially have access to this water, provided sufficient water rights are available. Santa Fe County's imported water source currently consists of water rights from the San Juan/Chama diversion. Other Rio Grande water rights may supplement this source in the future.

The Santa Fe River Watershed dates back to the 1880s. In the 1940s, streams on the west facing side of the Sangre de Cristos were providing all the water the City of Santa Fe needed. By 1985, this amount had been reduced by 50%, due to changes in climate, vegetation and increasing population growth (deBuys, 1985), and this water source was no longer sufficient for the needs of the citizens of Santa Fe. The 1960s and 1970s with a burgeoning population came an acceleration in groundwater pumping, and with lowered water tables, a number of the artesian springs and cienegas south and east of the TAP area began to dry up.

The City of Santa Fe currently utilizes three sources for its water supply: (1) the Santa Fe River and its reservoirs in Santa Fe Canyon; (2) 7 wells constructed in the 1950s along the Santa Fe River; and, (3) 8 wells (~600 feet deep) constructed in the 1970s along Buckman Road and Diablo Canyon.

The TAP lies within the Sangre y Jemez Water Region and Santa Fe River and Caja del Rio watersheds. It sits over a New Mexico aquifer (groundwater at 200-800 feet below the surface of the land) that is less vulnerable than those more shallow sources along the Rio Grande. However, this aquifer over which the TAP sits is not only the water supply

for our wells, but also a large part of the City of Santa Fe's water sources. The City has warned its residents that its well field water tables are falling. In the TAP, residents, particularly in the older subdivisions rely on wells, primarily single family wells, from 200-600 feet deep for their water. Subdivisions less than 10 years old generally have 4 houses per 10 acres (2.5 acre lot zoning), with a single well and 0.25 acre-feet (81,500 gallons) of water per year (225 gallons/day) for each lot. Some of the newest subdivisions, in development since 2000, are connected to the City of Santa Fe's water system, use monitoring program, and fee schedule. These have water usage limited at present by a fee structure.

E. Quality of life issues

Open space and trails are clearly very important features of the TAP for many residents. A very large majority responding to the survey felt that the rural character and open space is important and that hiking, biking, and horseback riding on the area's trails are important recreational activities. There are currently over 10 miles of trails in use in the area (but not dedicated as trails) according to the Santa Fe County inventory conducted in the fall of 2001. Most of these trails are on two-track roads which are in occasional vehicular use.

Light from outdoor lights, yard lights, and security lights was considered a problem by a large majority of respondents to the survey. Santa Fe County has in place an ordinance on lighting; however it is not uniformly followed. The lights from the City Recreation Center are a significant concern of residents.



VII. PROPOSED SOLUTIONS

A. Overall purpose, implementation, and emphasis of the plan:

The purpose of this plan is to provide a guide for development and zoning in the TAP, for ordinances affecting the quality of life in the area, for future county acquisitions of land, and for infrastructure.

The mechanism for implementing this plan is to require all land use proposals in the TAP to describe how they are consistent with the plan.

A particular emphasis of this plan is on providing for mechanisms of development that maintain the rural character of the area, particularly the quiet and open space that characterize it. Zoning should make ecological sense and should at the same time promote a sense of community.

A second emphasis is that development in the TAP must not exceed the natural resource base (e.g. water availability, septic system effluent handling capacity, clean air, etc.) necessary to support it.

B. Suggested specific recommendations

The specific recommendations are intended to be standards suitable for incorporation into ordinances. These are listed below.

Housing and development density

- The predominant development pattern for the TAP should be at a maximum density of about 1 house per 2-1/2 acres except as exempted by existing County agreements.
- As imported water becomes generally available, the development densities should remain at a scale and in character appropriate to surrounding land uses.
- Clustering of houses is strongly encouraged so as to lead to substantial areas of open space.
- Housing density bonuses should be used as a means to encourage the preservation of open space.
- Developments in the TAP should be encouraged to provide for affordable housing. A level of up to 15% affordable housing in a development should be encouraged using a density bonus of one addition unit per affordable housing unit.
- The existing Aldea de Santa Fe village center should be the primary village center within the TAP.
- Developments with both affordable housing and market-rate housing in the TAP will not segregate the affordable housing from the market-rate housing.

- The location, intensity, and design of new development shall respect existing neighborhood values, natural environmental conditions and carrying capacities, scenic resources, and resources of other social, cultural, or recreational concern.

Trails and open space:

Trails are integral to the multi-modal transportation system envisioned by the Santa Fe Urban and Extraterritorial Future Roads Plan (ARTF Plan) and the Metropolitan Transportation Plan 2005-2030. On- or off-the road trails are to provide safe alternative access for pedestrians, bicyclists and, in rural areas, equestrians. It is the intent of this Plan to create a trail network within the TAP that connects with the emerging trail system at the edge of the TAP planning area, as illustrated on the Roads and Trails Map. A major objective of trail placement should be to foster interconnections and a network that allows both East-West and North-South passage through and within the TAP.

- As recommended in the Santa Fe Urban and Extraterritorial Future Roads Plan, trails or sidewalks shall accompany all arterial, minor arterial, collector, and sub-collector roads. Trail connections prescribed by the TAP Roads and Trails Map shall be provided. Off-the-road trail systems – those not within a road easement or right of way - are preferable, and this requirement may be satisfied by an internal trail system providing equivalent connectivity.
- Major arroyos should wherever possible be considered for the location of trail easements.
- Key trail corridors that are desirable include: (1) A trail following the Arroyo Frijoles drainage from the City Recreation Center to the NE corner of the TAP, (2) a trail following the Arroyo de las Trampas from the junction with the Arroyo Frijoles to Puesta del Sol, (3) a trail from the Arroyo de las Trampas north to the Arroyo Frijoles near the Puesta del Sol neighborhood, (4) trail connections from the Arroyo Frijoles to the Santa Fe River, and (5) trail connections from the TAP to the Caja del Rio and to the Municipal Recreation area.
 - New developments must provide trails and trail connections as shown on the Roads and Trails Map.
 - The County and the community shall work with existing developments and property owners to provide trails and connections where feasible.
 - New development may not block access to the major trail system shown on the Roads and Trails Map. Wherever possible access to the major trail system shall be accomplished by providing off-the- road trails.
 - The County shall provide trail access along new County roads and arterials.
- The purpose of trails must be for non-motorized use.



- Safe road crossings should be spaced approximately every ½ mile for pedestrians and every mile for equestrians, consistent with the Santa Fe Urban and Extraterritorial Future Roads Plan and the TAP Roads and Trails Map. Trails should generally be spaced on half mile apart or less.
- At least thirty (30) percent of new development must be open space. Open space must be integrated into the trail system in the TAP.
- The County should be encouraged to purchase or obtain donations of land in the TAP for the purpose of preserving open space.
- Specific areas that are to be preserved as open space should be identified. Areas to be considered might include the Arroyo Frijoles, Arroyo de las Trampas, and portions of the Arroyo Calabasas.

Light, water, power, and noise

Water and Waste Water

Many property owners in the TAP area are dependent on wells for their water. Others are connected to a community or the city system. It is in everyone's best interest to promote a county-wide water and sewer system in the TAP area. Integration into those systems should be required for new developments when regional systems are available.

Given the relatively low densities of development in the TAP area, it is likely that connections to a regional water system or sewer system will not be feasible for existing residents for at least the near future. A near-term measure for existing residents could be the promotion of water conservation measures. The formation of a special assessment or public improvement district might also be considered when water and water rights are available to serve the area.

Since the aquifer is shared by the entire Santa Fe area, aquifer preservation and planning benefit everyone. Therefore the following steps are proposed:

New developments

- Applicants shall design and engineer any water system within subdivisions so that it may interconnect to a county water system, even if one is not available, and the development shall connect to county water as soon as it is available.
- Applicants shall design and engineer any sewer systems within subdivisions to allow common collection of water for a county sewer system, even if not currently available, and the development shall connect to county sewer as soon as it is available.
- All legal lots of record platted subsequent to the adoption of the TAP Community Plan will limit water use to a maximum of .25 acre feet per year. All existing undeveloped legal lots of record will follow this same standard.
- Clustering shall be encouraged to limit long term maintenance costs of water and sewer systems
- New developments shall be plumbed to simplify grey water recycling.

Existing residents

- The County shall work with residents to organize efforts to create large scale purchases of equipment and installation by residents for:
 - Rain water collection and recycling;
 - Grey water recycling;
 - Experimental black water recycling, with approval from the New Mexico Environment Dept.; and
 - Voluntary water usage metering.
- The County shall work to organize large scale maintenance efforts for these systems.
- The County shall work with the state where necessary to develop building codes to simplify water recycling methods especially relating to retrofitting.
- Although large scale water collection may not be feasible, small scale projects involving a group of homes may be possible. The County shall work with neighbors to identify and organize these where possible.

Light, power and noise

- All reasonable efforts to minimize light pollution shall be pursued. For example, the details of the existing County ordinances that restrict outdoor lighting should be publicized in the TAP and citizens should be encouraged to follow them so as to preserve the night-time sky and the rural character of the area.
- TAP should be a demonstration area to work with PNM to replace mercury vapor lights that are no longer allowed under State law and County ordinances with lights meeting night-sky standards.
- Overflights (including landing and takeoff from the Santa Fe airport) should minimize noise.
- All new utilities (electric power, telephone, etc.) must be underground.

Businesses

The TAP should remain primarily residential, agricultural, and ranching. There are three types of commercial development appropriate for areas within the TAP:

Village Center -- the TAP has one Village Center (Aldea), and due to the low density of development in the TAP and the proximity of shopping areas in adjacent areas and in Santa Fe, this should be sufficient for the entire TAP.

Mixed Use -- Due to proximity to the animal shelter to the north and a sawmill to the east, some parts of the Baca property (located at the SW corner of the TAP) that are not near Highway 599 may be suitable for mixed uses as transition zones at a scale and in a character appropriate to surrounding land uses.

Home-based occupations -- Occupations in residential homes conforming to regulations specified in the Extraterritorial Zoning Ordinance, Section 5.C.6.d, "Home occupations",

are encouraged throughout the TAP. These include home occupations in which no more than 2 persons are employed (other than family members residing on the premises), the principal use of the home is as a residence, the operations and structures are in keeping with the residential character of the neighborhood, any sale of goods is only of those prepared or produced on the premises, minimal traffic is generated, and no noise, odors, or other disturbances are detectable off the premises.

Development along NM599 should be consistent with the Highway Corridor Plan and existing legal agreements with landowners.

Roads and transportation

- The recommendations of the arterial roads task force for the area's roads should be implemented, except as exempted by existing County agreements.
- Roads in new developments should be designed to minimize runoff using impoundment and by minimizing total road area.
- Existing and new roads should be designed to include hiking, biking and horse trails built safely in or near the road edge.
- Bus service between Santa Fe and connections along NM599 should be developed.
- Emergency access in case of floods or fire is a problem for some existing developments in the TAP area. Solutions that should be considered include extending road connections to new arterials with all-weather crossings over the major arroyos and creation of an assessment or public improvement district to improve roads and fire protection.

Design standards-residential

- Note: Previously-approved Master plans are exempted from these design requirements
- **Setbacks:** See County and Extraterritorial Zone Codes as appropriate
- Article III of the County Code will govern height restrictions and terrain management requirements. Pitched roof structures are to have a maximum of 30% reflectivity.

Maximum Lot Coverage:

- See County Code

Landscaping:

- Maintain existing standards in the County Code.
- Plant drought-tolerant species outside of protected courtyards (as per County Code definition).
- Preserve native species and topography in setback areas and other undeveloped areas of property.

Lighting:

- All lighting must meet current applicable standards.
- Outdoor lighting shall be minimized, without sacrificing safety.
- Light design and installation shall emphasize low-level uniform lighting to avoid the nuisance and hazardous conditions caused by abrupt changes from bright lights to darkness.
- All lighting, including signs, shall be fully shielded and directed down.
- A maximum of 0.5 average horizontal foot-candles is preferred for all uses.
- Parking and security lights shall not be taller than 17 feet.
- Landscape lighting: low level lighting only (maximum 4 feet; no pole lights).

Other Architectural Standards:

- 30% maximum Light Reflective Value of building roofs.
- 40% maximum Light Reflective Value of building exterior

Design standards-commercial

- Note: Previously-approved Master plans are exempted from these design requirements
- ***Setbacks:*** See County Code
- ***Maximum Building Height:*** 24 ft. maximum

Maximum Lot Coverage: See County Standards

Outside Storage and Service Areas:

- SAME AS RESIDENTIAL STANDARDS

Landscaping:

- SAME AS RESIDENTIAL STANDARDS with additional standard: Minimum 1 ½ inch caliper deciduous trees at time of planting.

Lighting:

- SAME AS RESIDENTIAL STANDARDS

Exterior Signs:

- No off-site advertising or billboards.
- Monument style signs preferred
- No roof signs.
- No neon, traveling, or intermittent lights.
- One five-foot high monument sign only per building. (Maximum of 20 square feet; 5 feet minimum setback from property line).

Parking:

- Non-residential:
- Place parking to the sides and rear of buildings to minimize the visual impact from public roadways and adjacent residential neighbors.
- Screen parking from the public R.O.W. by landscape berm (minimum 3 feet, 3:1 maximum side slopes) or wall with landscaping (minimum 3 feet, maximum 4 feet), or use building or existing terrain and trees to screen. Berms may be combined with walls to provide screening.
- Screen parking from adjacent residential property by a stucco wall (minimum 4 feet; maximum 6 feet) and landscaping or naturalistic berm (minimum 3 feet; 3:1 maximum side slopes).

Other Architectural Standards

- Building exteriors to be finished predominantly with earth tone colors with 5% of frontage in brighter highlight and trim colors permitted.
- 30% maximum Light Reflective Value of building roofs.
- 40% maximum Light Reflective Value of building exteriors.
- Stucco exteriors as predominant material.
- Setback skylights and other rooftop structures and mechanical equipment a minimum of 2 feet from edge of building face and screen as part of the building design.
- Buildings roofs shall be constructed with non-reflective surfaces
- For buildings with flat roofs, parapets must be included

General

- Maximum width roads – two lane access and internal roads (except for required turning lanes, acceleration and deceleration lanes)
- Preserve distinctive natural features (such as vistas, arroyos, significant rock outcroppings, large trees), wherever possible.

Non-residential Building Setbacks from Residential Neighbors (except in areas developed as Villages under the County Code):

- 50 feet from property line of existing residential properties for building and parking areas.
- Building and parking setback may be reduced to 25 feet if buffered by 6 foot perimeter stucco, site wall or solid wood fence, or combination landscape berm (minimum 3 feet, 3:1 maximum side slopes). Berm should be naturalistic in style

C. Guidance for homeowners' associations and residents

1. List of Suggested items for Covenants, Codes, and Restrictions (CC&R's) in the area (These suggestions are meant to assist homeowner's associations and others in developing guidelines that they are comfortable with.)

In order to maintain the beauty and housing/habitat consistency within the Tres Arroyos Area, anyone subdividing land needs to seriously consider the following recommendations in preparing covenants, codes and restrictions (CCRs) for the property to be sold or transferred (to family members or others). By saving money on energy and transportation and by living in a more natural setting, the quality of life for our community's residents will be improved, as will the values of the homes/properties in the Tres Arroyos Area.

- Build homes that fit into the tone of the Tres Arroyos area; earth tones, low, one-story homes (14 feet in height or less) are aesthetically pleasing. Plantings will help provide color and individual character.
- Insist that housing be energy efficient, relying significantly on solar heat in the winter, and coated windows for summer. At the same time, suggest that new homes rely on carefully placed trees to help provide cooling as the sun moves overhead in the summer.
- Stress that communities be linked by energy efficient transportation systems (including bike paths and trails) to get people around.
- Consider water conservation in building new homes; install plumbing for gray water systems (waste water that comes from showers or washing machines or bath tubs) and/or water reclamation systems (rain barrels or other collection systems) in anticipation of future Santa Fe County needs and requirements.
- When installing outside lighting, place covers to limit light beams from brightening the deep, starry, night sky or your neighbors views, and shut off all outside lighting when not being utilized. Electricity, in these times of shortages, can no longer be considered an ornament

2. Suggested items for pamphlets and informational programs.

Native Plants and Vegetation

- Use xeriscaping techniques that require dry or limited water use. Xeriscaping can cut our water use 20-40 percent.
- Remember everything chemical you put in your garden can flow/leach into our wells, water sources and city's aquifer that underlies the Tres Arroyos area.



- Plant the right plants (native) in the right place (Tres Arroyos del Poniente)
- If you use non-native plantings of any kind, plant them near your home, preferably in an enclosed courtyard or space, where there will be less chance of their escape to native habitats.
- Plant a "transition zone" between ornamentals and native habitat, to further decrease the chance for spread of non-natives.
- Trees act as windbreaks. Plant them where they can help deflect the wind the most, on the east and west sides of your home. Know how large they are expected to grow and do not plant them right next to your home to ensure your foundation remains intact.
- Trees are useful materials for wildlife and us, providing shade (particularly if sited near southwest corners/areas of the property/home) and shelter. Many animals use tree bark (especially of the juniper) for nest materials and pine needles and leaves or vegetation for cover (especially for horned lizards and toads).
- Evergreen needles also are a tree's own natural fertilizer. Do not rake up pine needles, if you can help it.
- If you have deciduous trees, lightly rake those leaves, chop them and use the chopped material as mulch come spring.
- Use natural pest controls, such as ladybugs, praying mantis, earthworms, and compost. Most nurseries now have display areas where natural pest control products are sold.
- Use native shrubs and trees to help control erosion on slopes.

Native Wildlife

- Pick up any trash that blows onto your property to ensure wildlife does not become tangled in it
- Remove all invasive weeds, so smaller animals won't get tangled in the matted areas of vegetation that invasive species can form.
- Leave rock groupings, broken stone flower pots on their sides, and other such structures for shelter for lizards and smaller animals.
- Do not leave standing water unless changed regularly (at least every other day); small animals can drown in water more than an inch deep, and mosquitoes will lay eggs in standing water.
- Take care if you must use pesticides, chemical fertilizers or rodenticides; these compounds are dangerous to native wildlife, pets and children.
- Neaten your yard too much, raking pine needles or soils and you will remove habitat for lizards, toads, and other small creatures.
- Plant your garden with native species that attract birds, bees and butterflies.
- If you have fruit trees, try not to use netting to cover the fruiting tree; beneficial adult bull snakes and other critters can become entangled in fruit tree netting and die.
- If you have portals and vigas, bats, birds, and bumblebees, our plant pollinators, use them for shelter, resting and nesting.
- If you have fruiting cherry trees, beware of squirrels, which will pick your tree clean. A protective device such as a used on bird feeders or bird nest boxes will help keep squirrels and snakes away.

- If you choose to use bird feeders, use small amounts of seed/nectar and change it out at least every two days to avoid disease transmission and attracting ants.
- Do not kill native ants, they too provide needed services to your land and its wildlife; they are very socially structured animals, each with its own job to do, just like bees.
- If you have grass, you will have rabbits (remember, they were here first, we moved into their neighborhood), so protect the most important areas of your garden (edibles) by enclosing with impermeable fencing (stucco, with tiny drain holes).
- If you have water features, you will have toads. Try not to buy imported bull frogs or exotic aquatic plants into your water features; they often escape into the surrounding area and can overcompete with native toads or frogs and the non-native plants can invade streams. Remember that stagnant water can breed mosquitoes, so have a pump to move the water.
- Dogs and cats may instinctively chase (and kill or at least exhaust them of precious energy) birds and other wildlife. Keep your dogs on leashes or under control. Keep your cats on leashes or indoors if you can (Cats are second only to habitat loss in the cause of decline of migratory songbirds).
- If building a driveway or road, try to keep it of a permeable substance, such as dirt or gravel, or use permeable asphalt, and keep to a minimal width (16 feet). Doing this will help water from rainstorm events seep into the ground and be filtered, rather than causing erosion-producing run-off. Minimum widths help ensure that wildlife will still cross such linear obstructions.
- If building a fence, try to either make it impermeable to wildlife (if protecting vegetation or food crops); if building it to separate properties, make it wildlife-friendly, non-barbed wire or other such material, so that wildlife can cross through it.
- Remember that in the desert, wildlife struggles daily to survive and to find enough energy through food and water, so making them travel longer distances or move faster than normal robs them of that energy.
- If you have horses/goats/dogs, pick up manure/feces (use in your compost piles mixed with vegetation). Manure, if left exposed on the ground, attracts and breeds flies.
- If you have water collection systems, such as rain barrels under canales, be sure to screen them or cover them in some way in the spring, so as to avoid mosquito breeding to keep the Tres Arroyos area as mosquito-free as possible. Mosquitoes breed disease in us and our dogs, cats, and hoofstock. You can also place a teaspoon of cooking oil on the surface of the water in a rain barrel. This will kill mosquito larvae before they hatch.
- When hiking or biking, tread softly, lightly and quietly, to keep from scaring our native wildlife.

Invasive Plants

- Prevention of exotic species invasion is often far easier than control. Each tamarisk (salt cedar) if allowed to grow, puts out millions of seeds that float in air and on water. Eradicating mature salt cedar is nigh on impossible and very costly. The plant/tree cannot be destroyed with fire, is not easily controlled with chemicals, and even if it is cut to the ground, it regrows. The most often used remedy is to (when the

tree is not in seed) pull the entire plant/tree up by its roots and then destroy the entire plant by burning.

- When buying plants, particularly ornamentals, from nurseries, catalogs or the internet, ensure that your choices are native to our area and not invasive, spreading species. In the 1920s, tamarisk (salt cedar) began to be sold in San Francisco plant catalogs as ornamentals. People have bought this plant ever since for its beautiful pink flowers, but those flowers turn into deadly seeds that escape our yards and invade the natural habitat and water sources here in the Southwest. Do not be fooled by a plant's beauty. If it is native to Eurasia or Africa, it may do so well here as to push out native species.
- Invasive weeds are difficult to prevent, because spring winds often move seeds around large areas.
- Hand-weed once or twice a month, and ensuring that no invasives go to seed.
- Avoid disturbances, such as driving off-road or walking off-trail (which can track seeds everywhere) or moving large amounts of soil around or onto your property.
- Do not establish compost heaps where invasive plants have been disposed of and from which they can be spread.
- If you have invasive species that have gone to seed, gently remove them and place them directly in a plastic bag/covered container for disposal. Do not place weed seeds in the compost pile.

Water

- plant only drought-tolerant or drought-resistant vegetation in your yards; use the lists in the TAP plan appendices or contact the Sangre de Cristo Water Division for the Santa Fe Xeriscape Council's "low water use" plant list
- maintain the native vegetation in your yard and surrounding property
- don't use black plastic coverings to kill weeds around your plants; this will also kill your plants by not allowing roots to breathe and capture water
- if you feel you must have a water feature in your yard, utilize native plantings and gray water to keep the water in the pond filled and cleansed; native plants and native aquatic animals function as water cleansers
- insist that suppliers of plants and animals for your water features give you only NATIVE species so you can do your part to avoid introductions of non-native exotic species that often can out compete native plants and animals and take over native habitats
- use moveable containers for plantings indoors and outdoors; you can control the amount of water such plantings require
- mulch your plantings in your garden to minimize evaporation
- terrace your plantings to slow runoff during rain events
- practice integrated pest management or minimal use of pesticides following label guidelines
- use natural fertilizers, rather than chemical ones, so that the soil and plants can degrade these chemicals before they reach the groundwater aquifer that underlies the TAP

- as much as possible, limit your use of household chemicals, such as bleach, and especially toilet bowl and drain cleaners; using them will put them in your septic system, gray water system and in the groundwater aquifer that underlies the TAP
- recycle motor oil; motor oil collection sites Santa Fe include Jiffy Lube, Zip Lube, Crawford Chevrolet, Navarro Oldsmobile Cadillac, Pep Boys, Plaza Princesa 66, Courtesy Texaco, Sanchez VW and Cycle, Capitol Chevron, and Gibbs Chevron; you may wish to call first to ensure these entities still offer this service
- Discard substances like oil filters, antifreeze, paint thinner/stripper, varnish, rat poison, and lighter fluid in sealed containers as hazardous waste
- use low-phosphate or no phosphate soaps and detergents in your laundry, kitchen and bathroom. or ionic cleaning discs in your washing machine
- wash your car using a bucket of soapy water and sponge, followed by a bucket of rinse water, rather than using the hose; or wash your car using a sponge during a rainstorm!
- use a broom to clean walks and driveways rather than using a hose
- during home construction, ensure that soil disturbance is kept to a minimum
- when landscaping or constructing a home, do not overload a bank or a slope in order to help minimize erosion
- take quick showers and low-filled tub baths, instead of long showers or deep baths
- in using sinks for washing yourself or vegetables or anything else, place a plug or stopper prior to running the water to control the amount you use
- in using your washing machine, use the shortest cycle and the most minimal water level possible for the size of load you are doing
- try not to use your washing machine or dishwasher until you have a full load
- regularly maintain your septic systems by adding biological degrading materials to the system and ensuring the system is pumped periodically depending on its use
- if you suspect leakage from your septic system, contact a professional immediately
- work with Santa Fe County so that water use monitoring meters can be installed on all wells in the TAP to help you understand what your water use is, and adjust your use and conservation according to ensure reasonable and not excessive use
- work with Santa Fe County to establish water quality (biological and chemical) and water quantity (aquifer depth, well quality) monitoring done on a regular basis to ensure residents in the TAP are conserving water quality and quantity for the health of our families
- these County efforts will cost money; work with the County on bond measures to fund these efforts
- help the TAP help the NM State engineer plan for future supply, demand and options and alternatives to help balance supply and demand

Recommendations for Water Conservation:

- use outdoor water sparingly, particularly May to October (the City of Santa Fe recommends watering "even" addresses Wednesday, Friday and Sunday and "odd" addresses Tuesday, Thursday and Saturday)
- do not water outdoors in the middle of the day when evaporation is greatest; limit outdoor watering to the hours between 4 PM and 10 AM if at all possible

- deep soak your lawn only once or twice a week, instead of frequent short waterings
- water established trees, shrubs and perennials no more than once a week and less frequently during cool or rainy weather
- do not water on windy or rainy days
- make sure sprinkler heads and irrigation system emitters are properly adjusted to place water only where you need it, not in driveways or gutters
- construct berms and other water retention structures in areas of your yard where you have specific watering needs, such as for trees or ornamental plants
- harvest spare water (gray water) in barrels or containers from indoor appliances, such as washing machines, and from sinks, showers, while you wait for water to run hot in the shower for instance to use on your landscaped areas
- inspect your home regularly, indoors and out for any and all leaky faucets, connectors, pipes, couplings or hoses; repair them as soon as possible, but no longer than 30 days after noticing them
- if you have old plumbing fixtures, such as toilets, place displacement bricks or other water saver containers or devices in the toilet tank to conserve up to 4 gallons of water per flush
- flush the toilet only when necessary
- in construction and remodeling, use low flow, ultra low flow and other water saving plumbing fixtures in bathrooms, kitchens and laundries
- have a water analysis done on your home; contact numbers below can direct you to those services
- work with Santa Fe County to develop one or more ordinances that allow the construction of and encourages the use of gray water systems (collection systems for harvesting used water from washing machines, showers and tubs); during new home construction, plumb for gray water as well as black water (waste water from toilets, disposals, dishwashers, and other dirty waste sources) systems that can be brought on line once these ordinances are in place -- it is far less expensive to plumb a gray water system at the time of new construction than to install one post-construction

CONTACTS for QUESTIONS on Water Use, Water Quality and Water Conservation

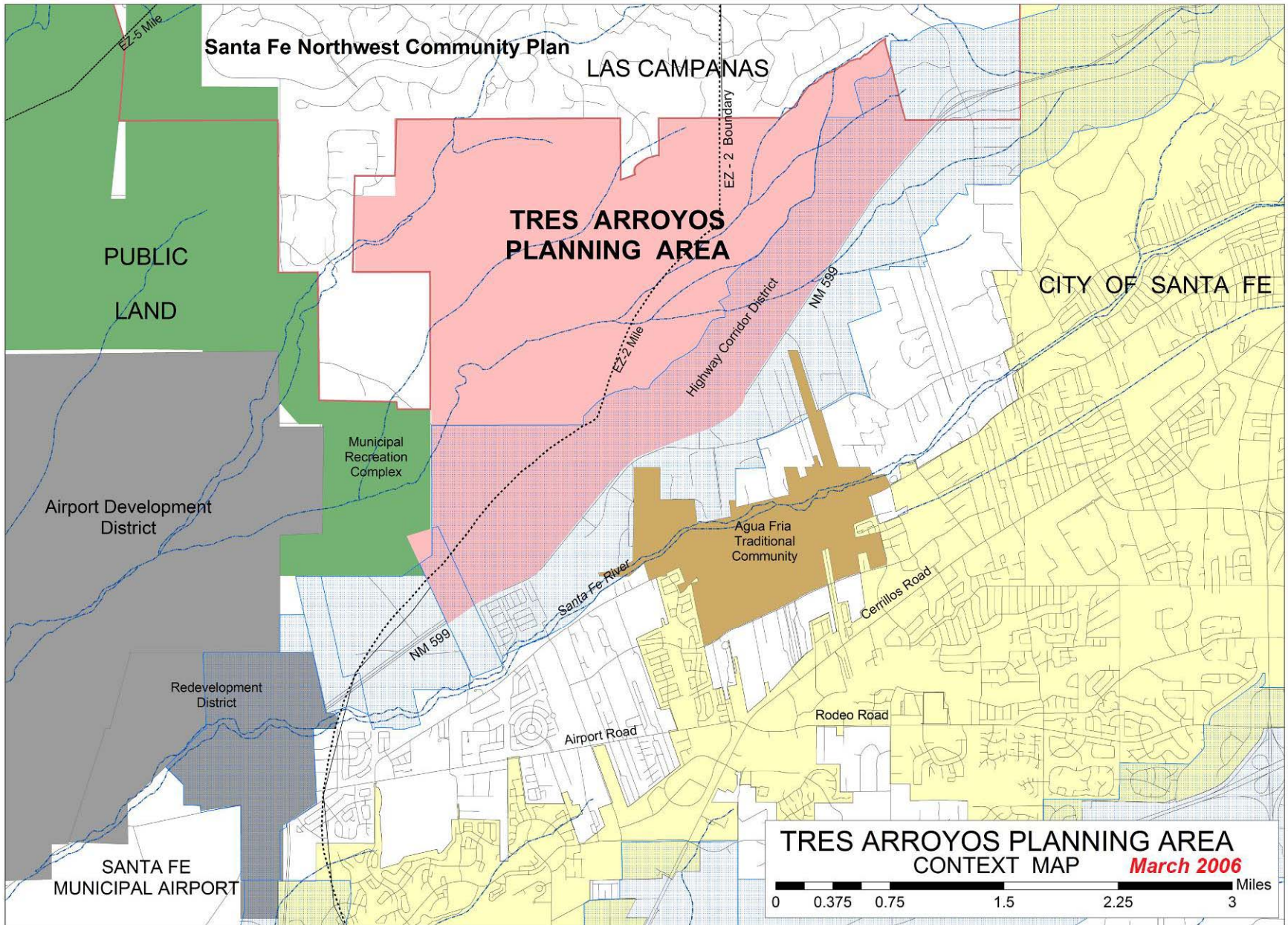
Sangre de Cristo Water Division, City of Santa Fe 505/954-7120
Sangre de Cristo Water Division Conservation & Retrofit Program 505/954-7199
State of New Mexico Environment Department 505/827-2919
Water on the Web <http://www.ose.state.nm.us> (NM Office of State Engineer)
<http://nm.water.usgs.gov>
The Jemez y Sangre Regional Water Planning Council maintains mailing lists and has open meetings at 3PM on the 2nd Monday of every month at Northern New Mexico Community College in Española. 505/986-6210

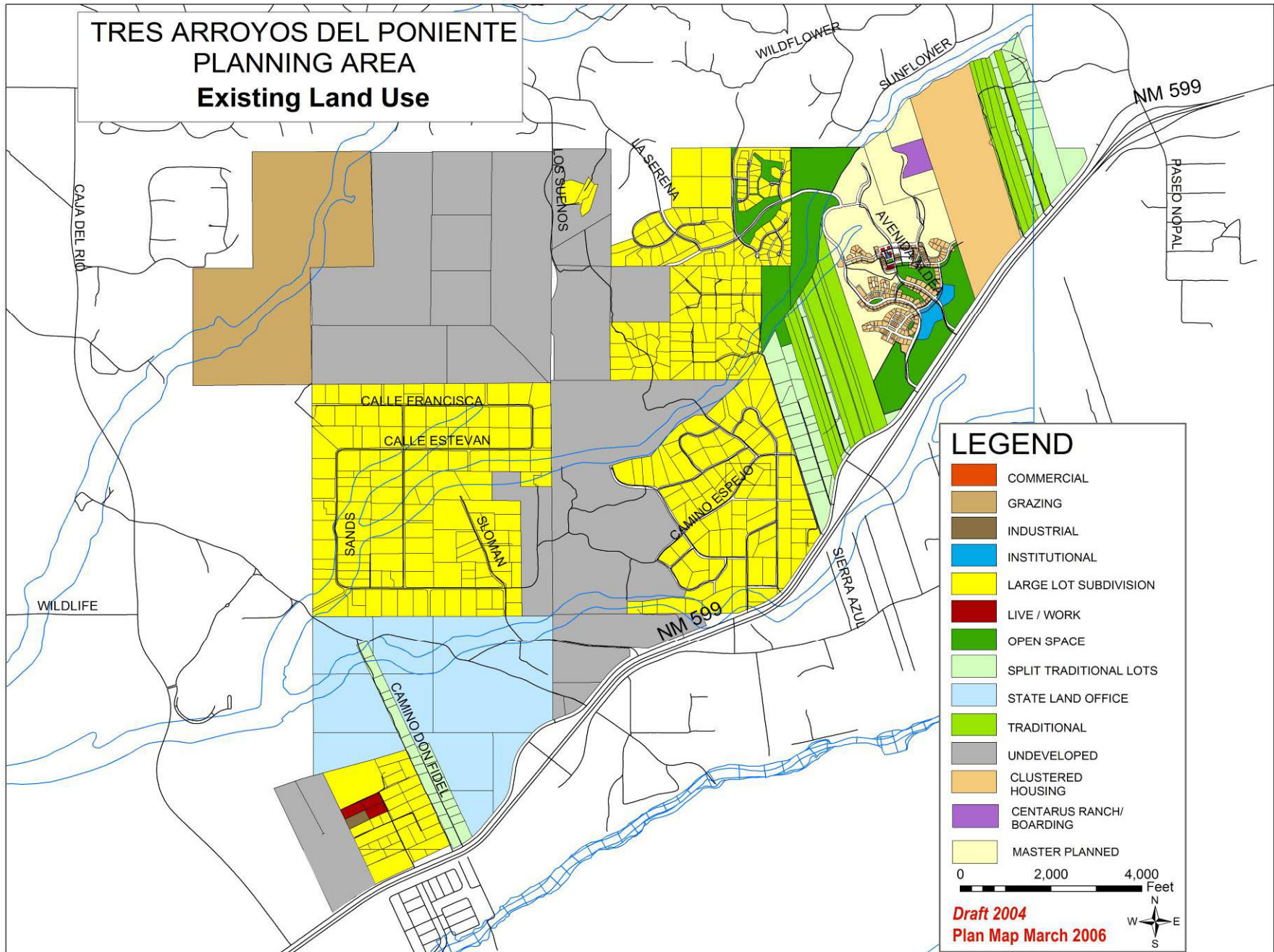
Other Tips

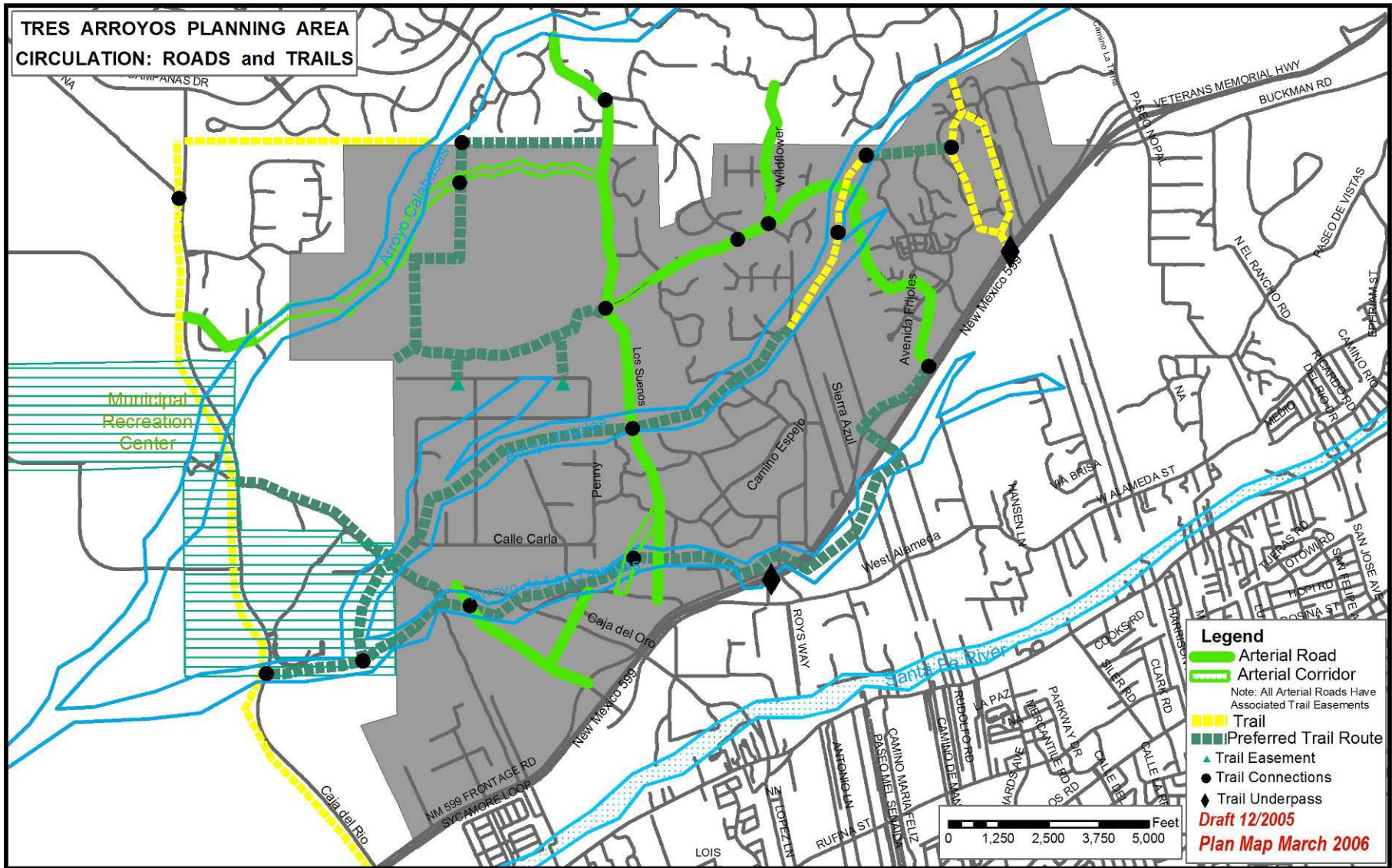
- Limit uses of chemicals to genuine necessities. Is it necessary to use a pesticide or would better window screens be as or more effective?
- Pick up and compost pet droppings, rather than leaving them available to attract flies that then prompt spraying of insecticides.
- Put out plants such as garlic in the garden to limit insect damage, rather than using chemicals.
- Grow native clover in your lawn to fix nitrogen rather than using mineral fertilizers that can runoff and enter groundwater.
- Recycle motor oil and antifreeze rather than disposing of them in sewers or trash.
- Buy locally made goods and foods that have not been transported by ship, train, airplane, and/or truck, thus lowering fossil fuel consumption and resultant air pollution.

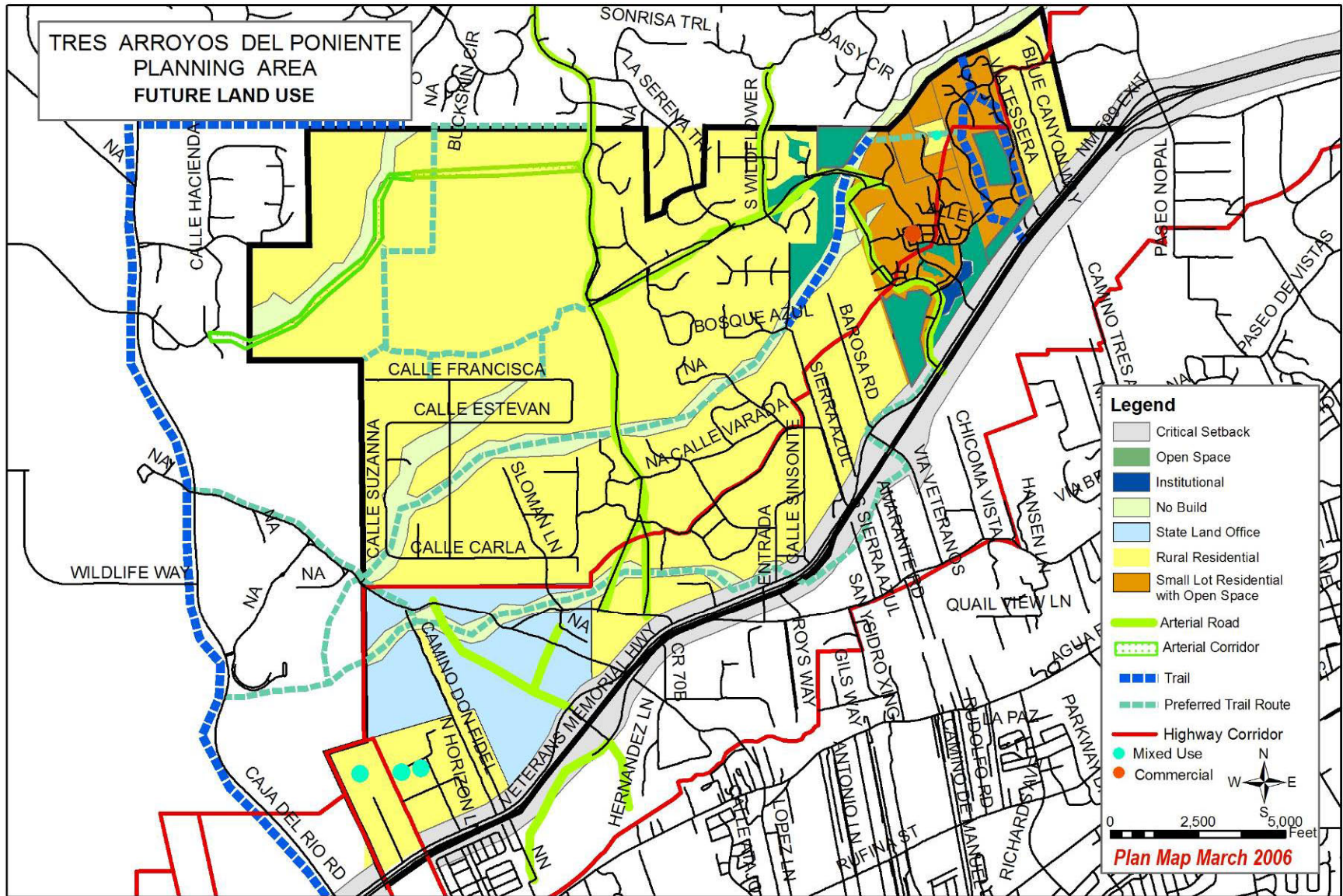
VIII. REFERENCES

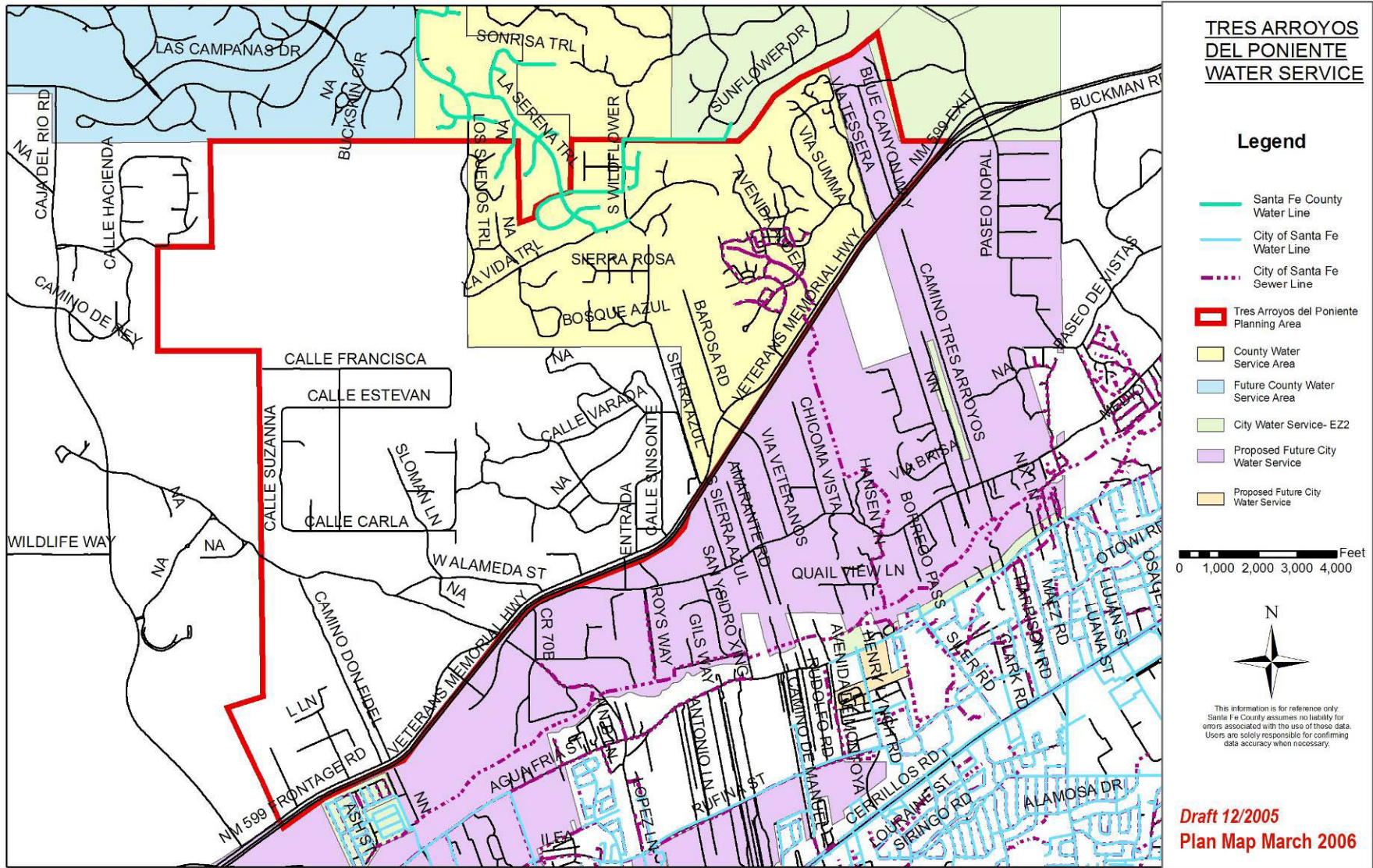
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Tres Arroyos del Poniente Community Plan

IX. Appendices

Appendix A. Application to Begin the Community Planning Process. Oct. 15, 1999

Appendix B. Community survey

Appendix C. Native flora and fauna in the TAP planning area

**Appendix A. Application to Begin the Community Planning Process.
Oct. 15, 1999**

Community Development Review Commission
Board of County Commissioners
Extraterritorial Zoning Commission
Extraterritorial Zoning Authority

100 Grant Street
Santa Fe, New Mexico

October 15, 1999

RE: APPLICATION TO BEGIN THE COMMUNITY PLANNING PROCESS

Dear Sirs:

The West Side Planning Coalition, consisting of representatives of contiguous communities located to the west of the city of Santa Fe, is submitting this application as a request to initiate formal community planning. We have considered the requirements outlined in Santa Fe County Ordinance Number 1998-5 (which addresses the community planning process) in making this request.

Specifically, this letter will:

- Request status as a Contemporary Community,
- Provide the information required for the planning application,
- Request designating this Community as a Critical Planning Area.

The stakeholders in our coalition believe that immediate planning for the future of this area is important. The area is at the beginning of a period of substantial expansion in development resulting from the Bypass construction, interest by developers and development of city resources such as the golf course. There is a unique opportunity for residents, developers, and neighbors to work together on ideas to help the area maintain its exceptional attractiveness, desirability, and property values, while providing for the expected large increase in population.

We believe that some consensus on how to plan for the future can be achieved because there are many issues that are already generally agreed upon but which need some coordination for maximum effect. For example, it is widely agreed that it is a good idea to maintain trail systems and to interconnect them as much as possible. Such a desirable outcome can be only achieved by active community planning including a trails system.

There are other issues where achieving consensus may be much more difficult, but that can nevertheless be discussed in a community planning effort. Some of these issues, for example, are development densities and density bonuses for developments that are particularly sensitive to community needs. We expect that both developers and residents of the community will have an interest in developing guidelines that are beneficial to the community as a whole since all parties will benefit from having the West Side community be a desirable place to live.

We believe that it is an important duty of the community members to come forward to develop a plan, and we plan to take this duty seriously. From a well-conceived planning initiative will come solutions that are consistent with the needs and desires of the community and that align with the Policy of the County's General Plan.

DESIGNATION AS A CONTEMPORARY COMMUNITY

The Coalition's Planning Committee (as constituted below) has established the preliminary boundaries of the planning area. The geography is bounded on the south and east by State Road 599 (Bypass), on the southwest by Caja del Rio road, and on the North and west by the Santa Fe Northwest Advisory Council (SNAC) planning area. This area is illustrated on the attached map (Exhibit 1).

This proposed area is not inclusive of any currently-designated Traditional Communities and meets all of the principal screening criteria listed in County Ordinance 1998-5. Therefore, we request designation as a Contemporary Community.

Specifically this area is:

- Not included in or near traditional communities.
- Composed presently of several large subdivisions, namely:
 - Pinon Hills and Alameda Ranchettes have about 100 lots on 640 acres
 - The Puesta del Sol and adjacent Al Lado de Puesta del Sol subdivisions comprise 85 lots on about 280 acres of land
 - Sierra Azul has 50 residential dwellings on 210 areas of land

The subdivisions of La Mirada and La Vida will consist of 50 lots on 79 acres and 24 lots on 80 acres, respectively

- Includes small subdivisions and single lot developments.
- Likely to be developed through large-scale subdivision. Over 560 lots have received master plan or preliminary development approval, and other areas are likely to be developed in the near term. These include:
 - Frijoles Village, a planned community to be developed on 340 acres, is expected to have 433 residential units, 100,000 square feet of commercial space, and an educational institution on site
 - The College of Santa Fe has plans to develop 88 lots on its 220 acres in the northeast portion of this planning area

- Several hundred acres of the Hager Estate (located directly north of Puesta del Sol and between Puesta del Sol and Pinon Hills) are available for purchase and possible development
- Commercial development is under discussion at the Interchange Business Park and other locations along the Bypass

On the basis of meeting the three criteria listed above, we request designation as a Contemporary Community.

APPLICATION TO COMMENCE PLANNING

The West Side Planning Coalition wishes to proceed with planning the future of its community and hereby asks for approval to do so. Below we have listed the requirements for seeking such approval and our method for addressing each:

Form a Planning Committee. The Coalition has carefully considered the diversity of the planning area. On the basis of that analysis, we have formed a Planning Committee to represent residents, property owners and developers, listed at the end of this application. Other voluntary members may be added through the participants at our public community meetings.

State conditions justifying a community plan. There are four principal issues and concerns in our community area; they are the:

- Expected significant residential and commercial development that will change the character of the community
- Loss of open space that defines much of the West Side landscape
- Inability of the existing and planned infrastructure to fully support this potential development
- The community's desire to have thoughtfully placed and constructed road and trail systems that consider quality of life issues.

Create a public participation plan. The Planning Committee is attempting to be sensitive to the needs of the Community. The Committee itself was designed to represent the communities' various stakeholders, and the Committee members will serve as a conduit to communicate the desires of those constituencies.

The Planning Committee has already held 7 publicly announced meetings in preparation for beginning the formal planning process, including an "Open House" meeting July 19, 1999 that was announced in a mailing to all landowners of record in the proposed planning area and was attended by 30 community members. We have gathered preliminary information on the concerns of community members through a survey included with the July 19 announcement. During the planning process, we expect to use additional community meetings, mailings, and written surveys to determine needs, rank their importance, and identify solutions. Once proposed solutions are developed, we will also seek continued input and feedback from the community.

List requirements for County involvement. As noted below, we request immediate assistance through the designation of our area as a Critical Planning Area. At a minimum, the Coalition's Planning Committee requests the following assistance from the County:

- On-going counsel on planning process, help with development of survey instruments, and review of materials developed
- Technical assistance for subprojects
- Accurate mailing lists of dwelling and property owners
- Tailored maps of the area and features (topographic, demographic, water service, land use, etc.) within it
- Access to existing data and research findings
- Reproduction and mailing services (such as copies, mailing labels, postage, etc.)
- Facilitation of community meetings, and
- Use of County facilities for such meetings, as necessary.

Summarize the available community resources. As one might expect, the principal community resource here is volunteer help who will conduct the planning activities. Additionally, the existing homeowners associations in the area, including the West Santa Fe Association, the Puesta del Sol Homeowners Association, and the Sierra Azul Homeowners Association will help with the planning process.

Set the boundaries of the planning area. The proposed planning area boundaries are shown on the attached map. Of special note are areas that are immediately adjacent to the proposed planning area. Several areas adjacent to the proposed planning area are already within the planning area defined by the Santa Fe Northwest Sector Plan. These include the La Serena subdivision and the lands between the proposed West Side planning area and the City of Santa Fe Recreation Center (formerly known as the King Brothers property). We propose to coordinate closely with these communities and to encourage participation by members of these communities in the West Side planning process, as specified in the SNAC community plan. Additionally, the area immediately to the South of the proposed planning area includes the proposed Village planning district. We feel that it is very important that this community be part of a community planning process, although it does not have to be the present one. We propose to include the community members in this area in our planning effort on an informal basis by notifying them of our planning effort and inviting them to work with us. If the members of this community so choose, we propose that their area join formally in our planning process at a later date.

Document rationale for Critical Planning Area designation: The Planning Committee firmly believes the issues facing our community are of such significance that our proposed Contemporary Community should be designated a Critical Planning Area (CPA).

On the basis of the criteria outlined in Ordinance 1998-5, we believe the multiple issues here constitute strong rationales for approving the CPA designation.

Key concerns are:

- *High historical growth rate.* Research by County Staff indicates the growth in vacant lots and dwelling units on the west side was over 20% in the four years from 1993 to 1997.
- *Envisioned level of future growth.* Numerous land areas within the boundaries of the planning area are in the process of being developed or likely to be developed soon. Projects including Frijoles, College of Santa Fe lands, La Mirada, and La Vida together will approximately double the number of current dwelling units in the planning area. In addition, the Hager Estate and related lands encompass over 600 developable acres.
- *Inadequate infrastructure to support growth.* The planning area has limited water resources to support potential additional growth. Other infrastructure services, such as fire and police, may be inadequate to support growth expectations.
- *Importance of trails and open space.* Development of the West Side will substantially alter the landscape. This means that it is very important to consider how to maintain open space and to preserve access to equestrian, biking and hiking trails.
- *Deterioration of the unique character of the community.* Many current residents in the planning area moved to the west side to take advantage of the visual impact of its natural, open landscape, the low traffic density and associated noise, lack of commercial development, easy access to trails, and its unlighted night sky. These attractions can be affected by growth, and it is important to develop a plan that helps maintain the attraction of the area.

In summary, approval of the CPA designation will be vital to the success of our planning process.

Name a community contact person. Mr. Tom Terwilliger (68 Camino Espejo, Santa Fe, NM 87501; terwilliger@santa-fe.net; (505) 667-0072) will serve as the contact person for the Planning Committee.

Show reasonable attempt to contact affected property owners. As mentioned above, we have already held 7 publicly announced meetings to begin to involve community members and to inform them about the planning process. We have notified all 350 landowners of record in the planning area by mail and have notified many others through our phone and email lists of 50 additional interested community members.

CONCLUSION

The Planning Committee of the West Side Planning Coalition appreciates your consideration of this application and its related requests. We are confident that teamwork among our community, the County and the City of Santa Fe will result in a well-conceived plan to address the issues facing our West Side community.

Appendix B. Community survey

A community survey of all property owners in the TAP planning area was conducted in March of 2001. A total of 356 surveys were mailed out based on the Santa Fe County tax records. Of these, a total of 101 surveys (28%) were completed and returned. The following table shows the survey questions and the percentage of respondents giving each possible answer to the survey.

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
					ROADS
13%	22%	9%	28%	29%	The NM 599 design provides safe use, access, and crossings for all TAP citizens.
					The NM 599 design has impacted the TAP's quality of life in these areas:
Better	Worse	No Change			Personal Safety
16%	63%	20%			Light Pollution
4%	70%	26%			Driving Convenience
71%	21%	8%			Noise Pollution
1%	79%	20%			Stormwater Drainage (erosion)
14%	49%	36%			Equestrian Access
8%	60%	32%			Bicycle Access
14%	59%	27%			Hiking Access
6%	65%	29%			Personal Security
13%	60%	26%			Even in these times of drought, NM 599 has already caused drainage and erosion problems.
34%	18%	36%	6%	7%	All new, and some existing roads, should have hiking, biking and horse trails built safely in or near the road edge.
62%	24%	7%	0%	7%	I am aware of the current county road development plan (based on Arterial Roads Task Force recommendations).
66% Not aware	34% Aware				

66% Support 34% Do not support

I support the current county road development plan (based on Arterial Roads Task Force recommendations).

53% 20% 8% 11% 7% I am in favor of improving and paving roads.

11% 16% 20% 31% 23% The County is doing an adequate job maintaining roads.

					WATER
Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
62%	23%	7%	4%	3%	Future land subdivisions and developments are a threat to water quality.
11%	33%	18%	23%	15%	There is enough water in the TAP for present needs.
3%	3%	14%	27%	52%	There is enough water in the TAP for future needs.
44%	22%	18%	9%	6%	Water use for new users should be limited to a specific maximum amount of water use.
21%	24%	25%	14%	15%	Water use for existing users should be limited to a specific maximum amount of water use. If so how?
5%	12%	15%	16%	52%	A community water source (e.g. city/county water system) should replace my well. Comment?
55%	19%	22%	0%	3%	I would like to see the county allow (and encourage) me to collect and re-use gray water in my yard.
22%	24%	28%	15%	11%	I think that ground water contamination from septic tank use will be a problem in the next 5-10 years.
22%	29%	14%	10%	26%	Community members should be required to replace their septic systems with a hook-up to the city/county sewer system when available.
74%	12%	11%	2%	1%	The water from my well is fine for drinking and cooking.

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	LAND USE
4%	16%	28%	25%	27%	The current county and extraterritorial zoning area land use codes provide a sufficient basis for planning within the TAP.
30%	33%	24%	8%	5%	The current county and extraterritorial zoning area land use codes are not strict enough
51%	35%	8%	1%	5%	Land use restrictions (such as zoning ordinances) are a good means of protecting natural resources.
59%	25%	7%	3%	5%	All divisions of land (excluding family transfers) should be reviewed by a local land use authority (such as EZC, the Extraterritorial Zoning Authority, and other city/county boards) to ensure that minimum requirements of adequate water, access, and buildable sites exists.
54%	21%	11%	7%	7%	All family transfer divisions of land should be reviewed by a local land use authority (such as EZC, the Extraterritorial Zoning Authority, and other city/county boards) to ensure that minimum requirements of adequate water, access, and buildable sites exists.
61%	23%	9%	2%	4%	Land use restrictions make the TAP a better place to live.
53%	27%	14%	3%	3%	Land use restrictions increase the value of my property.
48%	9%	42%			Which of the following best describes your feeling towards growth or non-growth in the TAP? (Check one)
1	2	3			<ol style="list-style-type: none"> 1. Develop policies to discourage growth 2. Develop policies to encourage growth 3. Neither encourage or discourage growth
51%	2%	47%			Do you think your area of the TAP is (circle one)
Too much	Too little	About right			<ol style="list-style-type: none"> 1. Growing too much 2. Growing too little 3. Growing about right.
70%	19%	1%	3%	7%	Future growth should coincide with the provision of adequate public services (e.g. safe community-wide drinking water, sewage systems, traffic management, schools, and public safety).

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
					LAND USE
					If growth is to occur, who should be responsible for the burden of paying for growth-related costs such as utility extensions (water, sewage, utility plant improvements, schools, etc.)? (Check all that apply)
15%	56%	27%	3%		
1	2	3	4		1. Taxpayers 2. Developers 3. Users 4. Other (specify) _____
					Schools should be located near libraries, parks, community centers and athletic fields.
52%	31%	15%	1%	1%	
33%	28%	13%	5%	22%	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New subdivisions should provide affordable housing in what percentage?
10%	20%	40%	60%	Other %	
28%	21%	15%	14%	22%	Allow for smaller residential lots in exchange for more open space within new subdivisions.
26%	74%				Would you be willing to donate land, money or easements for community open space areas?
Yes	No				
47%	53%				Would you be willing to donate land, money or easements for trails?
Yes	No				
23%	22%	18%	11%	26%	There is currently sufficient public open space in the TAP and vicinity.
42%	23%	21%	5%	8%	Working with landowners and developers to <u>voluntarily</u> grant access to walking, biking and equestrian for public use is important to me.
					Should property owners willing to grant trails easements for public use be compensated? (Check all that apply)
22%	65%	12%	1%		
1	2	3	4		1. No compensation 2. Compensation in form of County tax relief 3. Compensation in form of direct County payment 4. Compensation in form of community voluntary donations

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
COMMUNITY CHARACTER / QUALITY OF LIFE					
The community planning vision statement is:					
<p><i>“This plan seeks to reflect the wishes and desires of the people who reside, own property, and conduct business in this area. The plan tries to reflect the diversity of interests, and values the social connections and uniqueness of the area. The plan seeks to protect our open spaces and water resources for future generations. The plan area is where diversified housing and economic development are integrated, and pays particular emphasis to neighborliness and benefit to local residents. Although we recognize that with growth comes an increase in traffic and congestion, this plan seeks to organize these factors in such a way as to preserve the rural character of the area.”</i></p>					
56%	31%	5%	3%	6%	
Does the vision statement agree with your views regarding the future of TAP and the direction the Community Plan should be heading?					
37%	45%	13%	2%	3%	I am looking for new solutions to problems rather than being satisfied with things as they are.
84%	8%	5%	2%	1%	Maintaining the rural character of this area is important to me.
84%	9%	2%	1%	4%	Preserving open space is necessary to maintaining the area’s rural character.
58%	21%	15%	1%	5%	Hiking, biking and/or horseback riding on the area’s trails is an important recreational activity for me.
13%	12%	29%	8%	38%	Gated communities should be a part of the TAP.

Strongly Agree
Somewhat Agree
Neutral
Somewhat Disagree
Strongly Disagree

COMMERCIAL DEVELOPMENT

Note: Planning for commercial development within the community is a requirement for the Community Planning Process. Commercial development can range from community-based services (such as small grocery stores, etc., located within the various community areas) to non-community based services (such as gas stations, convenience stores, fast-food stores, etc., such as businesses associated with the Santa Fe Bypass intended for Bypass drivers). The following questions are intended to help determine where, what kind and how much non-community needed commercial development is desired.

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
3%	4%	4%	11%	78%	Non-community based commercial/retail should be allowed in the TAP.
22%	25%	16%	14%	23%	Public institutions (museum, library, community center) should be included in the TAP.
23%	27%	14%	14%	22%	Other institutions (schools, clinics, churches, etc.) should be included in the TAP.
9%	12%	13%	15%	49%	Professional offices should be included in the TAP.
5%	1%	5%	7%	81%	Amusement parks should be included in the TAP.
2%	1%	7%	8%	81%	Franchise businesses should be included in the TAP.
5%	4%	6%	9%	75%	Light industry (such as electronics assembly, or other non-smokestack plants) should be included in the TAP.
5%	18%	23%	13%	41%	Home-based businesses that will tend to generate customer traffic within the community such as real estate, medical, art galleries, etc., should be included in the TAP.
42%	34%	9%	9%	5%	Home-based businesses that will <u>not</u> tend to generate customer traffic within the community should be included in the TAP.
36%	24%	12%	14%	15%	Small-scale agricultural businesses such as equestrian, small animal, tree farming, gardening, should be included in the TAP. Please list agricultural businesses that should be included:
74%	16%	5%	0%	4%	All business buildings should be regulated by design standards such as building height, setbacks, color, architecture, signage, lighting, etc.

Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
					COMMERCIAL DEVELOPMENT
					Any commercial activities that are part of the TAP but not located in homes should be located: (check all that apply)
9%	28%	62%			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1. Scattered throughout the TAP
1	2	3			2. Along the Bypass (Hwy. 599)
					3. In community (village) centers
12%	20%	16%	21%	30%	I support <u>small</u> mixed use developments (residences, multi-family, and up to 3 commercial structures organized for surrounding community support services).
8%	3%	6%	11%	71%	I support <u>large</u> mixed use developments (residences, multi-family, and more than 4 commercial structures organized to support the development's and surrounding community support services).
3%	5%	3%	10%	79%	I support attraction of more businesses along Hwy. 599 to stimulate the local economy.
80%	7%	4%	0%	8%	I would object to any development along the stretch of Hwy. 599 that could interfere with the rural character of our community.
72%	6%	5%	5%	11%	I would object to any development anywhere within the TAP that would interfere with the rural character of our community.

					ENVIRONMENT
Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree	
91%	5%	2%	1%	1%	Development in the TAP must not exceed the natural resource base (e.g. water availability, septic system effluent handling capacity, clean air, etc.) necessary to support it.
60%	18%	9%	7%	5%	Planning for parks, greenbelts, trails and open space for recreation and sports activities in the TAP is important to me.
8%	9%	15%	14%	54%	Should construction of buildings visible on hilltop or ridge-top areas be allowed?
71%	12%	5%	4%	7%	Restrictions on the glare (brightness) of outdoor lights, yard lights, and security lights are important to me.
30%	30%	27%	6%	6%	Flooding or drainage is a problem in the TAP?
25%	19%	37%	15%	4%	There is a fire danger in the TAP? If there is a danger, please list suggestions how to decrease the danger.

Appendix C. Native flora and fauna in the TAP planning area

FLORA and FAUNA of the TRES ARROYOS del PONIENTE AREA

I. New Mexico can at times have too little rain, too much wind, extreme temperature fluctuations, and poor soils. The Tres Arroyos del Poniente area on the west-northwest side of Santa Fe County (an area described as north central Santa Fe County in the *Santa Fe County Growth Management Plan*) is no exception.

II. Here in the neighborhoods represented by this plan, we live in the Upper Sonoran Life Zone (6500-8500 ft elevation). The unique rolling mesas, arroyos, piñon-juniper forest and other associated native vegetation are defined by the climate, rainfall, and soil types in the area. Native plants (flora) and animals (fauna) depend on these distinct components for survival. And the flora and fauna around us as we live our lives in the residential and commercial environs of the Tres Arroyos del Poniente area are intricately related and intertwined; everything is connected in our piñon-juniper and juniper-savannah ecosystems.

III. THE PINON-JUNIPER FOREST and JUNIPER-SAVANNAH ECOSYSTEMS where we live are mid-elevation, rocky, rolling mesa habitat covered by piñon and juniper trees and spacious, widespread short to medium prairie grasslands with juniper and some piñon trees respectively.ⁱ In general, the piñon-juniper associations on north-facing rolling hills are more sparse than those on south-facing slopes, for reasons related to climate as noted below.ⁱⁱ

A. The Climate and Climate Zoneⁱⁱⁱ

The climate of the Tres Arroyos area is that of high desert. We are on the cusp of the US Department of Agriculture's zone 5/6 classification, with most areas falling into zone 5. The temperature in the Tres Arroyos area ranges from 10-89° F (minimum to maximum), generally with June being the warmest month and January being the coldest month. Here, the first frost date most often occurs between October 1 and October 31, with that date in some years occurring in September. The last frost date is generally between May 1 and May 31. There is an old-timers tale in our part of New Mexico where you have a clear view of the Sangre de Cristos, that if the thunderbird is still on Mount Baldy do not plant your vegetable garden; look east to the Sangres and north past the Santa Fe ski area to the "bald" mountain with just a small horizontal clumping of trees mid-way up it shaped like a thunderbird or phoenix [when surrounded by snow]. When the snow melts enough, "the thunderbird is off the mountain" and you can plant your vegetables and flowers without fear of killing frosts. Test this tale and you will find it true to form, having existed in oral history here for hundreds of years.

Precipitation

Without water, life of all kinds in this high desert diminishes and struggles. In general, the average rainfall in this area is about 12 inches a year (with a range of 6.7-20.7 inches of rain and up to 36" of snow per year)^{iv}. July, August and May are usually the wettest months (in that order); February is the driest. The "rainy season" or "monsoons" begin on July 1 in a normal year. During winter, there are usually 8-10 snow events, with 2-3 of those lasting on the ground more than a day. Rain and snowfall in this area supplies needed water for the flora and fauna of the Tres Arroyos area.

Wind

March 1 to June 15/July 1 is the windy season here in the Tres Arroyos area. Blowing sand and seeds accompany this most annoying time of year. Plants and animals can easily become dried out and dehydrated.

Soil Types and Soil Preparation^v

Soil Types

Healthy soil is essential for healthy flora and fauna. Soil provides nutrients and support for plants that provide nutrient support for animals and for us. Soil is a reservoir, where water cleansing and recharge occurs with water that flows back into the aquifer. The City of Santa Fe aquifer underlies the Tres Arroyos area and that area west to the Rio Grande. The soil in our area, as in other parts of New Mexico often has high pH (alkaline), low organic matter, and low nitrogen levels. Here the soil component often is not all that deep and can be gravelly or rocky. If one digs deeply (4-6 feet or more) in the soil on the properties of this area, a caliche/tuff/very hard calcium layer is often encountered; these substances are soft rock that often takes a jackhammer and much effort to break through. Nearer the surface however, the Tres Arroyo area is composed of four general soil types — (1) sand, (2) silt, (3) clay, and (4) loam. Pick up a representative handful of soil from your property and rub it between your fingers:

1. Sand – has a gritty feeling when it is dry; when wet a “ball” of sand falls apart. Sandy soil has few nutrients and little water-holding capacity.
2. Silt – feels like talcum powder when dry; when wet silt sticks together but cannot be shaped.
3. Clay – feels harsh when dry, when wet clay is very sticky & heavy and can be molded.
4. Loam – this is the most common soil type in our area and is a mixture of the 3 types above.

Soil Testing

You can test the soil on your property yourself to determine what the loam in your yard is composed of, or you can take/send samples to laboratories at various places round the state (garden clubs, master gardeners, NMSU Soil and Water Lab, agricultural extension services, at nurseries or commercially at laboratories) for analyses of pH, salt content, organic matter, nitrogen, phosphorus, potassium and calcium. Any test samples should be collected and tested in the summer. If you intend to use a commercial laboratory, each laboratory has its own procedures, so call before you take samples.

To do a quick determination of the soil types on your property^{vi} you can first remove grass, debris, and/or organic matter from each of 3 or 4 sites. Then take representative samples (dig down at least 6 inches getting a slice of sample from top to bottom) from each of these sites and mix them together in a large jar. Add water, shake and wait. Each layer filters out to a different point with sand on the bottom, then silt, then clay.

You can estimate the percentage of each in your "loam" soil. Once you know that, most nurseries can help you determine how best to supplement your soil.

Soil Amendment

There are two major components for amending nutrient-poor soils in the Tres Arroyos area. The organic matter recommended is either animal manure (red worm, chicken, horse, cattle, and sheep) or composting (yard "waste" or clippings, kitchen "waste" or nutrients). In general our soils (unless amended) lack humus, which helps hold water naturally and keeps water evaporation to a minimum. It is important to "age" manure, that is, let it sit for at least a month; not aging it means it will have too much nitrogen to apply near the root zone of actively growing plants. Too much nitrogen will cause the tips of the leaves to dry out and appear burned. Never amend soil in our area with ashes from fireplaces or barbecues, since ash is extremely alkaline and only adds a dis-service to our already too alkaline soils. Coffee grounds and tea leaves, being acidic organic compounds, are particularly useful in amending soils in our area.

Ground Preparation

Growing a new yard area at the time of new home construction or purchase of a previously owned home can be difficult. First pick up any trash, pieces of cement/stucco, and other materials that may have been left behind at the conclusion of construction. Pile stones and rocks under run-offs from canales to provide "splash guards" and water storage areas during storm events. Mix aged manure, compost and other organic matter (leaves, grass clippings) together and dig it into the soil at least 4-6 inches deep. To do this to the entire yard can be exorbitantly costly (both in time and money), so you may wish to piecemeal this process, digging it into an area where you know you are going to plant a specific vegetable, flower seed, tree or plant.

Some master gardeners at this point recommend (in order to increase the amount of nutrients in the soil) planting an annual green cover crop, such as clover; let it grow in, but before it goes to seed, dig it under. Try to find a native clover to use, since using one that is not native to the area, will be difficult to eradicate if, for whatever reason, you do

not turn the crop under in time. Digging, hoeing, and deep raking are effective soil preparation techniques – more so than roto-tilling. Roto-tilling produces soil particles of too uniform a size and thus cuts down on some of the services soils deliver. After planting, be sure to mulch; mulching helps plants grow in sandy soil and keeps clay soils from crusting over. Mulch for spring planting can be "home-made" from leaf debris and vegetation you chopped last fall. A healthy layer of mulch (2-3 inches) also helps retain water and keep the soil at a cooler temperature.

After several years of following the soil preparation steps here, you will build up rich soil out of sand and clay.

Natural Pollinators

Birds, bees and butterflies are attracted to flowering plants, particularly those which have large, enticing flower petals. Pollination occurs mechanically. A bird, bee or butterfly feeds on the flower's nectar and in so doing picks up pollen on its legs, wings and/or mouth parts. Then the bird, bee or butterfly moves to another plant to feed, cross-pollination occurs. Without wildlife services such as these creatures provide, we would have little luck at growing fruits or vegetables or wildflowers.

Chemicals

Avoid the use of chemicals on the grounds surrounding your home, if at all possible. Use of dusts or sprays or time-release chemicals in the yard to kill weeds (herbicides), insects (insecticides) and/or other pests (pesticides) often not only kills natural pollinators, but also in many cases can kill grass, flowers, native vegetation, small native animal species (living on the ground, in the air or in water), and can poison your pets and sterilize soils, (so soil microorganisms that break down such chemicals are killed). If you are in the yard and have sunscreen or insect repellent on, remember that you can cause serious injury and can poison small animals you pick up, such as toads, lizards or snakes; their skin is permeable to whatever gets on it, and brings the chemical internally to affect their body systems.

If you absolutely must use chemicals, since many chemicals are soluble in water, avoid applying near streambeds or ponds. Be sure to follow label dilution directions exactly. And use only at dusk after most pollinators and critters are in their shelters for the night.

Native Vegetation/Flora

Plants are at the bottom of the foodchain; every living thing depends on plants, whether for oxygen or food or shade or shelter. Plant roots hold the earth's soil in place, provide wind breaks, and increase the absorption of water after rainstorms. Forests and fields of flowers provide aesthetic beauty, as well as economic benefit.

Native vegetation provides more services than imaginable. Evergreen trees and plants act as natural dust diminishers, trapping dust and keeping it from polluting the air. Cryptogamic soil supports much of the juniper, grasses, cacti and other flora in the Tres Arroyos area. This crusty, brownish-black fragile soil, is formed by physical and biotic

processes, and depends on microorganisms for its sponge-like form and function. Cryptogamic soil is made up of a conglomerate of lichens, mosses and algae; it fixes nitrogen, and holds water, seeds and soils in place. It is however very fragile and slow to recover if damaged (MacMahon, 1990), so tread lightly or avoid it altogether if you can.

A wonderfully native yard increases property values. Native plantings provide privacy, play areas, pet areas, color, wind protection, wildlife food, vegetables for our tables, and compost to use the following season. Keep your yard growing in native plants and you will not only conserve water, but also lend a soothing, comfortable air to the Tres Arroyos area in which we all live. Amend soils with natural compost materials, in appropriate amounts, so as not to affect groundwater quality. Build berms/water features that store water that plants and wildlife can use. Try using biological components, like ladybugs, to control insects, rather than chemicals. Birds, bees, and butterflies pollinate/fertilize most flowers and trees, so keep these creatures healthy and happy, too. Use wildlife-friendly “barbless” wire fences, allowing wildlife, pets, and us to move across distances without potential injury from barbed-wire. Healthy native plants also act as protection from forest fires (cut down and remove dead or dying trees, brush, or other plantings that are near your home). Fire-resistant plants are healthy, green, growing plants, particularly yarrow, agave, cholla, rosemary, evergreen sumacs and trunkless varieties of yucca.

Pinon pine (*Pinus edulis*) is the state tree of New Mexico. It provides food (nuts) for people and animals alike. It takes about 150 years for a piñon to grow to 6 inches diameter at its base.^{vii} Juniper trees (*Juniperus monosperma*, *J. scopulorum*) live in close association with the piñon in the Tres Arroyos area. When building, remodeling or siting a home, choose an area where the fewest number of piñons and junipers are. If you must build where there are already existing trees, transplant them to locations on your property that provide privacy, windbreaks (especially on the west and east sides of your property or home), shade (particular on southwest corners/areas), and access to water sources. Hire a professional tree expert to transplant adult trees; make sure a sizable root ball is included for transplanting (this also holds true for piñons you may buy at a nursery or especially at a roadside).

The low humidity, windy weather and fluctuations in temperature can dry out transplanted piñons and junipers even in winter. In winter, thoroughly water (deep soak) transplanted evergreens once a month. The rule of thumb is for each inch diameter of the transplanted tree trunk, you will need to water at least that many winters for your transplanted trees to survive. For instance if a piñon tree trunk is 4 inches in diameter when transplanted, it will require monthly watering in winter (and in dry summers) for 4 years. Deciduous trees, whether newly planted or established, need to be watered in winter also. Water two or three times between when deciduous trees drop their leaves in fall and when buds begin to swell in spring. In summer, rain events are violent, sporadic and often of short duration. Water your yard plantings if rainfall lasts less than an hour. If rain falls consistently over an hour, you can assume this is a soaking rain and you will not need to water for three days. If rain falls steadily for three hours or more, you can wait a week before watering.^{viii}

Native grasses, such as grama, galleta or buffalograss, or native bunch grasses, such as Indian ricegrass, bluestem or muhlygrass add beauty, serenity, and color to your landscape. Short grasses can be planted near the home and are soft if cut as one would a turf lawn. Waiting until seed heads mature to cut a native lawn, and/or cutting as a last event in fall, will help reseed the area come spring. Consider using colorful and fragrant groundcovers, such as thyme, vinca, desert zinnia, snow-in-summer, or phlox, in outside areas that are not used directly for sitting or playing; groundcovers need little maintenance and can provide a cooling effect even in direct sunlight. Bunchgrasses can add height to your landscaping whether near the house shadowed by shorter plants and wildflowers in front, or off in the distance in transition zones between landscaped and native vegetation. If you did not cut in late fall, cut native grasses back to a 6-inch height in early spring, before the growing season starts.

Cholla, prickly pear, chamisa, and yucca can provide protection from wildlife or pets entering special areas of your yard, can be security features near windows, and can add diversity of texture and color to any yard.

A yard that is properly graded will retain rain and snowfall, rather than water running off the area of most importance to maintenance of your yard. Building artificial earthen berms downslope from plantings or stone gabions (in arroyos) can also help with retention of water in areas where you need it most. A retention pond can serve as a water feature, as long as you maintain at least a semi-permeable bottom, surround it by native aquatic plants (to provide shade and help correct evaporative loss), install a pump to keep water moving (not stagnant), and include native aquatic animals, such as toads, frogs and turtles.

Drip irrigation is the most efficient and effective way in which to water plants, flowers, shrubs, trees and vegetables. Sprinkler systems are the least effective and efficient, since with the winds in the Tres Arroyos area, water can be lost to evaporation, and fall on walks, driveway, or walls, rather than on targeted plantings. While plantings are establishing themselves, water them at least once in December, January and February, once or twice a week March through May, three or four times a week in the hot months of June and July, and one or two times a month in fall. If you focus on using native plants that require minimal water, after they become established (which often takes 2-3 years in the Tres Arroyos area), you may be able to discontinue irrigation altogether, except in times of drought or severe wind.

Native Wildlife/Fauna

Attracting wildlife to your yard can provide hours of delight, intrigue and interest. Children and adults alike are enchanted by wildlife. Providing perching or resting areas will attract a great variety of wildlife species. Installing nest boxes (be alert in spring to songbirds using your newspaper boxes! Think about stopping delivery while eggs/chicks are present, or ask the carrier to place the paper on the ground during these times) gives breeding birds places of comfort and protection. Many birds have nest fidelity, meaning they will come back to the same location year after year, if it continues to be provided. In

our area, birds have been known to nest in cholla, under portals and vigas, and in trees dense enough to provide cover protection. If you choose to put out birdseed or nectar, be sure to put out small amounts at a time, protect those areas from rain if possible, and change the seed or nectar every other day at a minimum to reduce the risk of disease and ant infestation. If you want to help with nest building, set out dryer lint, dog hair or hairbrush discards on the edge of your yard.

In developing any planning options for native plants and wildlife, it is important to keep in mind certain basic conservation tenets. Remember, we are trying to insert habitat, plants/flora and animals/fauna as "infrastructure", into our neighborhood, just as we plan for roads, utilities and other services. To do this, in our planning efforts we need to try to conserve and protect native plant and animal species that occur in the Tres Arroyos planning area, try to maintain the largest units of open space/undisturbed areas as possible, and ensure whenever possible that large, connected, well-distributed areas are available, since they are far more effective small, unconnected, fragmented areas for ensuring healthy, native flora and fauna.

There are two general types of healthy habitat: (1) those that are well designed and maintained to meet the needs of human beings, and (2) those that fulfill the needs of a broad and diverse group of competing native organisms. Not all human habitats are healthy for native organisms. But habitats where native organisms are healthy are healthy places for us! We may not be keenly aware of this, but we rely on healthy habitats and healthy native organisms to purify our air and water, regulate climate, fertilize soil, protect us from wind and dust, and produce healthy wildlife. Compared to healthy natural habitats, the areas we choose to modify and/or neaten up to meet our needs can become sparse in species diversity and are less likely to provide beneficial services to us.

Native ornamental grasses provide seed and cover for all sorts of wildlife, including quail and small mammals. Fence lines provide roosting and resting areas for raptors. Wildlife species need water, too. Providing one or more shallow water sources, particularly in dry months will bring the wildlife to it. Ensure that the water sources are either moving water such as with water features, or standing water, such as birdbaths or shallow pans, where water is changed out at least every other day to prevent disease transmission. Keep water shallow to protect the smaller critters from drowning. Rock piles, woodpiles, and compost piles are also areas that will attract wildlife. Remember the more innovative and diverse habitat features you can provide, the more likely you are to attract a wide variety of wildlife.

B. Non-Native/Invasive/Exotic Species of Plants and Animals

Invasive species are now recognized as one of the most dire threats to the Nation's wildlife and ecology.

(Jamie Clark, Former Director, U.S. Fish and Wildlife Service, 9/24/98.)

Everywhere, and of special importance to those of us in the West, our lands and waters are being transformed by "invasive species", "alien invaders", or "exotics". As you drive south on I-25 toward Albuquerque at the Galisteo River, look to the east or west. The river channel gets narrower every year; tamarisk (salt cedar) and Russian olive have sucked up the majority of the water available, essentially choking out the native cottonwoods, willows and streamflow.

Invasive species are plants or animals out of place. Invasive plants and animals are not native to the place they find themselves, have purposefully or inadvertently been introduced into an area, and have few or no natural enemies or predators, so they thrive and multiply with little competition. They push out native species, transforming healthy, productive landscapes into unproductive wastelands. Disturbance of an area may accelerate invasions, particularly following construction, road building, or soil/debris movement. Invasive plants have less capacity than native species for holding soil, and extensive infestations of invasives may result in increased soil erosion with siltation of streambeds and waterways. Some invasive plants will remain at relatively low levels for many years, and then suddenly explode within a very short time. This can fool people into thinking they don't need to take action against them. Once established, a good number of invasive plants are virtually impossible to eradicate and very difficult to control by any means. Some have root systems that go 15-40 feet deep. Others produce root buds, so control by plucking or weeding (if not all roots are removed) may actually increase, rather than decrease, the number of plants present. Others have long seed viability – as much as 15 to 30 years – so control requires a long-term commitment. What controls one species may enhance another. And what works in one season, or under one type of climate condition, may not work well in another.

Most invasive weeds have little, if any, food value for wildlife, and where they are allowed to become well established, wildlife populations and species diversity decrease significantly. A number of native plants are under threat of becoming endangered or extinct as a result of invasive weeds.

We know that wildlife knows no boundaries. Neither do invasive species. We need to start now, setting the stage for ensuring that the Tres Arroyos area does not succumb to invasives, and that we prevent permanent damage to native ecosystem in which we live.

Conclusions

This section of the Tres Arroyos del Poniente plan helps us recognize how our quality of life is interconnected and integrated with the aesthetic beauty of where we live, including

the native flora and fauna residing here with us. This is part of the reason we all have chosen to live here. We all need to pitch in, and do our part to provide consistency in promoting healthy native flora and fauna, and discouraging non-native and invasive species. By working together as a community, we can make a difference for every person who lives here in the Tres Arroyos del Poniente area of Santa Fe County.

SUB-APPENDICES

1. Native Wildlife Fauna of the Tres Arroyos Area
2. Native Trees of the Tres Arroyos Area
3. Native Shrubs of the Tres Arroyos Area
4. Native Wildflowers of the Tres Arroyos Area
5. Native Grasses of the Tres Arroyos Area
6. Native Plants for Attracting Birds and Butterflies
7. Invasive Species to Watch Out for in the Tres Arroyos Area

1. WILDLIFE (Fauna)

Mammals, Birds, Amphibians, Reptiles, Species of Concern, Threatened/Endangered

Mammals, Common

Bat, long-legged	<i>Myotis volans</i>
Bat, big brown	<i>Eptesicus fuscus</i>
Bat, little brown	<i>Myotis lucifugus</i>
Chipmunk, cliff	<i>Eutamias dorsalis</i>
Cottontail, desert	<i>Sylvilagus auduboni</i>
Cottontail, mountain	<i>Sylvilagus nuttalli</i>
Coyote	<i>Canis latrans</i>
Jackrabbit, black-tailed	<i>Lepus californicus</i>
Mouse, field (deer)	<i>Peromyscus maniculatus</i>
Mouse, northern grasshopper	<i>Onychomys leucogaster</i>
Mouse, piñon	<i>Peromyscus truei</i>
Mouse, rock	<i>Peromyscus nasutus</i>

Mammals, Less Common

Bat, hoary	<i>Lasiurus cinereus</i>
Bat, small-footed	<i>Myotis subulatus</i>
Bobcat	<i>Felis rufus</i>
Chipmunk, Colorado	<i>Tamias quadrivittatus</i>
Fox, gray	<i>Urocyon cinereoargenteus</i>
Fox, red	<i>Vulpes vulpes</i>
Gopher, plains pocket	<i>Geomys bursarius</i>
Jackrabbit, white-tailed	<i>Lepus townsendii</i>
Mouse, brush	<i>Peromyscus boylii</i>
Mouse, hispid	<i>Perognathus hispidus</i>
Mouse, silky pocket	<i>Perognathus flavus</i>
Kangaroo rat, bannertail	<i>Dipodomys spectabilis</i>
Kangaroo rat, Ord's	<i>Dipodomys ordii</i>
Porcupine	<i>Erethizon dorsatum</i>
Prairie dog, black-tailed (Gunnison)	<i>Cynomys ludovicianus</i>
Shrew, wandering	<i>Sorex vagrans</i>
Skunk, striped	<i>Mephitis mephitis</i>
Squirrel, rock	<i>Spermophilus variegatus</i>
Vole, long-tailed	<i>Microtus longicaudus</i>
Weasel, long-tailed	<i>Mustela frenata</i>
Woodrat, bushy-tailed	<i>Neotoma cinerea</i>
Woodrat, Mexican	<i>Neotoma mexicana</i>
Woodrat, white-throated	<i>Neotoma albigula</i>

Birds, Common

Bluebird, mountain	<i>Sialia currucoides</i>
Chickadee, black-capped	<i>Parus atricapillus</i>
Crow, American	<i>Corvus brachyrhynchos</i>
Dove, mourning	<i>Zenaidura macroura</i>
Dove, rock (pigeon)	<i>Columba livia</i>
Finch, house	<i>Carpodacus mexicanus</i>
Flicker, northern	<i>Colaptes auratus</i>
Flycatcher, ash-throated	<i>Myiarchus cinerascens</i>
Gnatcatcher, blue-gray	<i>Poliptila caerulea</i>
Goldfinch, American	<i>Spinus tristis</i>
Goldfinch, lesser	<i>Spinus psaltria</i>
Grackle, great-tailed	<i>Quiscalus mexicanus</i>
Harrier, northern (Marsh hawk)	<i>Circus cyaneus</i>

Hawk, Cooper's	<i>Accipiter cooperii</i>
Hawk, red-tailed	<i>Buteo jamaicensis</i>
Hummingbird, black-chinned	<i>Archilochus alexandri</i>
Hummingbird, broad-tailed	<i>Selasphorus platycercus</i>
Hummingbird, rufous	<i>Selasphorus rufus</i>
Jay, piñon	<i>Gymnorhinus cyanocephala</i>
Jay, scrub	<i>Aphelocoma coerulescens</i>
Junco, dark-eyed	<i>Junco hyemalis</i>
Kingbird, western	<i>Tyrannus verticalis</i>
Magpie, black-billed	<i>Pica pica</i>
Nighthawk, common	<i>Chordeiles minor</i>
Nuthatch, red-breasted	<i>Sitta canadensis</i>
Nuthatch, white-breasted	<i>Sitta carolinensis</i>
Owl, great horned	<i>Bubo virginianus</i>
Poor-will, common	<i>Phalaenoptilus nuttallii</i>
Quail, Gambel's	<i>Lophortyx gambelii</i>
Raven, common	<i>Corvus corax</i>
Robin, American	<i>Turdus migratorius</i>
Solitaire, Townsend's	<i>Myadestes townsendi</i>
Sparrow, chipping	<i>Spizella passerina</i>
Sparrow, house (English)	<i>Passer domesticus</i>
Sparrow, song	<i>Melospiza melodia</i>
Starling, European	<i>Sturnus vulgaris</i>
Tanager, western	<i>Piranga ludoviciana</i>
Titmouse, plain	<i>Parus inornatus</i>
Towhee, brown	<i>Pipilo fuscus</i>
Turkey vulture, common	<i>Cathartes aura</i>
Warbler, black-throated gray	<i>Dendroica nigrescens</i>
Wren, house	<i>Troglodytes aedon</i>

Birds, Less Common

Bluebird, western	<i>Sialia mexicana</i>
Bunting, indigo	<i>Passerina cyanea</i>
Bushtit, common	<i>Psaltriparus minimus</i>
Chat, yellow-breasted	<i>Icteria virens</i>
Crane, sandhill	<i>Grus canadensis</i>
Gnatcatcher, blue-gray	<i>Polioptila caerulea</i>
Goose, Canada	<i>Branta canadensis</i>
Grosbeak, blue	<i>Guiraca caerulea</i>
Grosbeak, black-headed	<i>Pheucticus melanocephalus</i>
Grosbeck, evening	<i>Coccothraustes vespertinus</i>
Hawk, ferruginous	<i>Buteo regalis</i>
Hawk, sharp-shinned	<i>Accipiter striatus</i>
Jay, Steller's	<i>Cyanocitta stelleri</i>
Kestrel, American	<i>Falco sparverius</i>
Kinglet, golden-crowned	<i>Regulus satrapa</i>
Mallard	<i>Anas platyrhynchos</i>
Quail, scaled	<i>Callipepla squamata</i>
Phoebe, Say's	<i>Sayornis saya</i>
Sparrow, American tree	<i>Spizella arborea</i>
Sparrow, lark	<i>Chondestes grammacus</i>
Swallow, tree	<i>Tachycineta bicolor</i>
Swallow, barn	<i>Hirundo rustica</i>
Towhee, rufous-sided	<i>Pipilo erythrophthalmus</i>
Towhee, spotted	<i>Pipilo maculatus</i>
Vireo, solitary	<i>Vireo solitarius</i>

Warbler, Virginia	<i>Vermivora virginiae</i>
Warbler, yellow	<i>Dendroica petechia</i>
Waxwing, cedar	<i>Bombycilla cedrorum</i>
Woodpecker, downy	<i>Ricoides pubescens</i>
Woodpecker, Lewis's	<i>Asyndesmus lewis</i>
Woodpecker, ladder-backed	<i>Picooides scalaris</i>
Wren, Berwick's	<i>Throamanes bewickii</i>

Amphibians, Common

Toad, New Mexico spadefoot	<i>Spea multiplicata</i>
Toad, Woodhouse	<i>Bufo woodhousei</i>

Amphibians, Less Common

Toad, Plains spadefoot	<i>Spea bombifrons</i>
Tiger salamander	<i>Ambystoma tigrinum</i>

Reptiles, Common

Lizard, collared	<i>Crotaphytus collaris</i>
Lizard, Eastern fence (Plateau/prairie lizard)	<i>Sceloporus undulatus</i>
Lizard, short-horned (horny toad)	<i>Phrynosoma douglassii</i>
Whiptail, Chihuahuan spotted	<i>Cnemidophorus exsanguis</i>
Whiptail, little striped	<i>Cnemidophorus inornatus</i>
Whiptail, New Mexico	<i>Cnemidophorus neomexicanus</i>
Whiptail, plateau striped	<i>Cnemidophorus velox</i>
Whiptail, spotted	<i>Cnemidophorus sacki</i>
Bull snake (gopher snake)	<i>Pituophis melanoleucas</i>
Corn snake (Plains rat snake)	<i>Elaphe guttata</i>
Garter snake, western	<i>Thamnophis elegans</i>
Night snake	<i>Hypsiglena torquata</i>
Rattlesnake, prairie (Western)	<i>Crotalus viridis</i>
Whipsnake, desert striped	<i>Masticophis taeniatus</i>

Reptiles, Less Common

Coachwhip	<i>Masticophis flagellum</i>
Garter snake, black-necked	<i>Thamnophis cyrtopsis</i>
Glossy snake	<i>Arizona elegans</i>
Hognose snake, Western	<i>Heterodon nasicus</i>
Lizard, lesser earless	<i>Holbrookia maculata</i>
Milk snake, New Mexico	<i>Lampropeltis triangulu</i>
Patch-nosed snake, mountain	<i>Salvadora grahamiae</i>
Skink, great plains	<i>Eumeces obsoletus</i>
Whiptail, checkered	<i>Cnemidophorus tessellatus</i>
Rattlesnake, Western diamondback	<i>Crotalus atrox</i>

Species of Concern (State of New Mexico designations - Birds, Animals and Plants)

Mammals

Bats

Fringed myotis	<i>Myotis thysanodes</i>
Long-legged myotis	<i>Myotis volans</i>
New Mexican meadow jumping mouse	<i>Zapus hudsonius luteus</i>
Occult little brown bat	<i>Myotis lucifugus occultus</i>
Pale Townsend's (=western) big-eared bat	<i>Plecotus townsendii pallescens</i>
Small-footed myotis	<i>Myotis ciliolabrum</i>
Spotted bat	<i>Euderma maculatum</i>
Yuma myotis	<i>Myotis yumanensis</i>

Birds

American peregrine falcon	<i>Falco peregrinus anatum</i>
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>
Baird's sparrow	<i>Ammodramus bairdii</i>
Ferruginous hawk	<i>Buteo regalis</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Northern goshawk	<i>Accipiter gentilis</i>
White-faced ibis	<i>Plegadis chihi</i>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>

Fish

Flathead chub	<i>Platygobio (=Hybopsis) gracilis</i>
Rio Grande sucker	<i>Catostomus plebeius</i>

Reptiles

Texas horned lizard	<i>Phrynosoma cornutum</i>
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Plants

Chiricahua dock	<i>Rumex orthoneurus</i>
Santa Fe cholla	<i>Opuntia viridiflora</i>

Threatened

Birds

Bald eagle	<i>Haliaeetus leucocephalus</i>
Mountain plover	<i>Charadrius montanus</i>

Endangered

Mammals

Black-footed ferret	<i>Mustela nigripes</i>
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Birds

Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>
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Fish

Rio Grande silvery minnow	<i>Hybognathus amarus</i>
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2. Trees for Planting in the Tres Arroyos Area¹

Alder	<i>Alnus tenuifolia</i>
Ash, Texas	<i>Fraxinus texensis</i>
Aspen, quaking	<i>Populus tremuloides</i>
Birch, river	<i>Betula nigra</i>
Buffaloberry, silver	<i>Shepherdia argentea</i>
Catalpa, western	<i>Catalpa speciosa</i>
Cedar, incense	<i>Calocedrus decurrens</i>
Chitalpa (desert willow x catalpa)	<i>Chitalpa tashkentensis</i>
Cottonwood, valley	<i>Populus fremontii</i>
Cypress, Arizona	<i>Cupressus arizonica</i>
Hawthorn, thornless cockspur	<i>Crataegus crus-galli</i>
Hoptree	<i>Ptelea trifoliata</i>
Juniper, one-seed	<i>Juniperus monosperma</i>
Juniper, Rocky Mountain	<i>Juniperus scopulorum</i>
Locust, New Mexico	<i>Robinia neomexicana</i>
Madrone, Texas	<i>Arbutus texana</i>
Oak, Emory	<i>Quercus emoryi</i>
Oak, Gambel	<i>Quercus gambelii</i>
Olive, New Mexico	<i>Forestiera neomexicana</i>
also called Desert olive	
also called Desert privet	
also called Mountain ash	
Pinon pine	<i>Pinus edulis</i>
Redbud, Oklahoma	<i>Cercis reniformis</i>
Redbud, western	<i>Cercis occidentalis</i>
Soapberry	<i>Sapindus drummondii</i>
Sumac, prairie flameleaf	<i>Rhus lanceolata</i>
Sycamore, Arizona	<i>Platanus wrightii</i>

NEVER substitute non-native olive trees for those listed above.

Do NOT plant:

Chinese tallow tree *Triadica sebifera*

Siberian (Chinese) elm *Ulmus pumila*

(or other species of Asian tree, as they tend to spread rapidly here, taking over natives)

¹ Phillips, Judith, 1995, *Plants for Natural Gardens*, Museum of New Mexico Press, Santa Fe, 148 pp.

3. Flowering Shrubs Adaptable to the Tres Arroyos Area^a

	Spring-flowering
Beauty bush	<i>Callicarpa americana</i>
Current, golden	<i>Ribes aureum</i>
Fruit and nut trees (cherries, plums, apples, peaches, almonds, etc.)	
Honeysuckle (native variety)	<i>Lonicera albiflora</i>
Locust, New Mexico	<i>Robinia neomexicanus</i>
Mockorange, littleleaf	<i>Philadelphus microcarpa</i>
Mockorange, sweet	<i>Philadelphus coronarius</i>
Penstemon, bush	<i>Penstemon ambiguus</i>
Western sand cherry	<i>Prunus besseyi</i>
Summer- or Fall-flowering	
Apache Plume	<i>Fallugia paradoxa</i>
Beebrush	<i>Aloysia wrightii</i>
Blue mist	<i>Caryopteris clandonensis</i>
Broom, NM, summer	<i>Fenista tinctoria</i>
Butterfly bush	<i>Buddleia davidii</i>
Chamisa or Rabbitbrush	<i>Chrysothamnus nauseosus</i> , <i>C. viscidiflorus</i>
Chaste tree	<i>Vitex agnus-castus</i>
Cholla	<i>Opuntia imbricata</i>
Cinquefoil, shrubby	<i>Potentilla fruticosa</i>
Clematis	<i>Clematis pseudoalpina</i>
Cliffrose	<i>Cowania mexicana</i>
Coralberry	<i>Symphoricarpos orbiculatus</i>
Dalea, feather	<i>Dalea formosa</i>
Fendlerbush, cliff	<i>Fendlera rupicola</i>
Hybiscus	<i>Hibiscus syriacus</i>
Lavender	<i>Lavandula spp.</i>
Mahogany, mountain	<i>Cercocarpus montanus</i>
Mahogany, other varieties	<i>C. brevifolius</i> , <i>C. intricatus</i> , <i>C. ledifolius</i>
Manzanita	<i>Arctostaphylos spp.</i>
Prickly pear	<i>Opuntia phaeacantha</i>
Rose shrubs	<i>Rosa spp.</i>
Sage, bigleaf	<i>Artemisia tridentata</i>
Sage, purple	<i>Psoralea scoparius</i>
Sage, silver	<i>Artemisia cana</i>
Sage, threadleaf	<i>Artemisia filifolia</i>
Sage, other varieties	<i>Salvia greggii</i> , <i>S. lycioides</i> , <i>S. pinquefolia</i>
Saltbush, fourwing	<i>Atriplex canescens</i>
Snowberry	<i>Symphoricarpos albus</i>
Sumac, littleleaf	<i>Rhus microphylla</i>
Sumac, threeleaf	<i>Rhus trilobata</i>
Willow, coyote	<i>Salix exigua</i>
Winterfat	<i>Ceratoides (Eurotia) lanata</i>
Woods rose	<i>Rosa woodsii</i>

DO NOT PLANT the following shrubs, which can be highly invasive in this area:

Scotch broom	<i>Cytisus scoparius</i>
Honeysuckle, non-native	<i>Lonicera spp.</i>

^a Doxon, L.E., 1999, *High Desert Yards & Gardens*, University of New Mexico Press, Albuquerque, NM, 230 pp.

4. Native Grasses and Bunchgrasses^a

Beargrass	<i>Nolina texana, N. microcarpa</i>
Bluestem, little	<i>Andropogon (Schizachyrium) scoparium</i>
Bluestem, sand	<i>Andropogon hallii</i>
Bluestem, silver	<i>Andropogon saccharoides</i>
Buffalograss	<i>Buchloe dactyloides</i>
Burrograss	<i>Scleropogon brevifolius</i>
Cottontop, Arizona	<i>Digitaria (Trichachne) californica</i>
Fescue, sheep	<i>Festuca ovina</i>
Fluffgrass	<i>Tridens pulchellum</i>
Galleta	<i>Hilaria jamesii</i>
Gramma, blue	<i>Bouteloua gracilis</i>
Gramma, black	<i>Bouteloua eriopoda</i>
Gramma, sideoats	<i>Bouteloua curtipendula</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>
Muhly, bamboo	<i>Muhlenbergia porteria</i>
Muhly, mountain	<i>Muhlenbergia montana</i>
Muhly, spike	<i>Muhlenbergia wrightii</i>
Needle-and-thread	<i>Stipa comata</i>
Sacaton, giant	<i>Sporobolus wrightii</i>
Splitbeard	<i>Andropogon ternarius</i>
Threeawn, purple	<i>Aristida purpurea</i>
Western wheat	<i>Andropogon smithii</i>

DO NOT PLANT the following grasses, which can be highly invasive and are of poor nutritional quality:

Bamboo	<i>Thamnocalamus spp.</i>
Cogongrass	<i>Imperata cylindrica</i>
Johnson grass	<i>Sorghum halepensis</i>
Lovegrass	<i>Eragrostis tricores</i>
Pampas grass	<i>Cortaderia jubata, C.selloana</i>

(or other ornamental grasses of Asian or African origin, because they spread rapidly in this area and can fuel forest fires tendencies)

^a Phillips, Judith, 1995, *Plants for Natural Gardens*, Museum of New Mexico Press, Santa Fe, 148 pp.

5. Wildflowers for Use in the Tres Arroyos Area²

Angel trumpets	<i>Mirabilis longiflora</i>
Aster, baby	<i>Leucelene ericoides</i>
Aster, golden	<i>Chrysophus serrulatus</i>
Aster, purple	<i>Machaeranthera bigelovii</i>
Aster, white	<i>Aster ericoides</i>
Beeplant, Rocky Mtn	<i>Cleome serrulata</i>
Blanketflower (Firewheel)	<i>Gaillardia aristata</i>
Bluebells, California	<i>Phacelia campanularia</i>
Blue bowls	<i>Gilia rigidula</i>
Blue-eyed grass	<i>Sisyrinchium demissum</i>
Buckwheat, sulphur	<i>Eriogonum umbellatum</i>
Butterfly weed	<i>Asclepia tuberosa</i>
Cardinal flower	<i>Lobelia cardinalis</i>
Chocolate flower	<i>Berlandiera lyrata</i>
Coneflower (Mexican hat)	<i>Ratibida columnifera</i>
Coneflower, purple	<i>Echinacea purpurea</i>
Cornflower	<i>Centaurea cyanus</i>
Daisy, Blackfoot	<i>Melampodium leucanthum</i>
Daisy, Tahoka	<i>Machaeranthera tanacetifolia</i>
Dusty miller	<i>Centaurea cineraria</i>
Flameflower	<i>Talinum calycinum</i>
Flax, blue	<i>Linum lewisii</i>
Four-o'clock, giant	<i>Mirabilis multiflora</i>
Gayfeather	<i>Liatris punctata</i>
Gentian, purple	<i>Eustoma grandiflora</i>
Germander, cutleaf	<i>Teucrium laciniatum</i>
Globemallow, scarlet	<i>Sphaeralcea coccinea</i>
Goldeneye, showy	<i>Viguiera multiflora</i>
Goldenrod	<i>Solidago canadensis</i>
Groundsel, silver	<i>Senecio longilobus</i>
Harebells	<i>Campanula rotundifolia</i>
Hollyhock	<i>Alcea rosea</i>
Hopi tea (Rayed cota)	<i>Thelesperma ambigna</i>
Hyssop (Bubblegum mint)	<i>Agastache cana</i>
Hummingbird trumpet	<i>Zauschneria latifolia</i>
Indian paintbrush	<i>Castilleja integra</i>
Lamb's ears, wooly	<i>Stachys lanata</i>
Licorice, wild	<i>Glycyrrhiza lepidota</i>
Marigold, desert	<i>Baileya multiradiata</i>
Marigold, wild	<i>Cyssodia acerosa</i>
Milkwort	<i>Polygala alba</i>
Mink, scarlet	<i>Stachys coccinea</i>
Mule's ear, desert	<i>Wyethia scabra</i>
Onion, nodding	<i>Allium cernuum</i>
Paperflower	<i>Psilostrophe tagetina</i>
Penstemon, Alamo	<i>Penstemon alamosensis</i>
Penstemon, cardinal	<i>Penstemon cardinalis</i>
Penstemon, desert	<i>Penstemon pseudospectabilis</i>
Penstemon, firecracker	<i>Penstemon eatonii</i>
Penstemon, narrowleaf	<i>Penstemon angustifolia</i>
Penstemon, pineleaf	<i>Penstemon pinifolius</i>
Penstemon, Rocky Mtn	<i>Penstemon strictus</i>

² Phillips, Judith, 1995, *Plants for Natural Gardens*, Museum of New Mexico Press, Santa Fe, 148 pp.

Penstemon, wandbloom	<i>Penstemon virgatus</i>
Perky sue	<i>Hymenoxys argentea</i>
Phlox, Chihuahuan	<i>Phlox mesoleuca</i>
Phlox, creeping	<i>Phlox subulata</i>
Phlox, Santa Fe	<i>Phlox nana</i>
Phlox heliotrope	<i>Heliotropium convolvulaceum</i>
Poppy, prickly	<i>Argemone pleiacantha</i>
Poppy mallow	<i>Callirhoe involucrata</i>
Prairie clover, purple	<i>Petalostemum purpureum</i>
Prairie smoke (Avens)	<i>Geum triflorum</i>
Primrose, Mexican	<i>Oenothera berlandiera or speciosa</i>
Primrose, Missouri	<i>Oenothera missouriensis</i>
Primrose, Organ Mtn evening	<i>Oenothera organensis</i>
Primrose, white-tufted even'g	<i>Oenothera caespitosa</i>
Puccoon, fringed	<i>Lithospermum incisum</i>
Purple mat	<i>Nama hispidium</i>
Pussytoes	<i>Antennaria parvifolia</i>
Sage, pitcher	<i>Salvia azurea</i>
Scarlet bugler	<i>Penstemon barbatus</i>
Snapdragon, vining	<i>Maurandya wislizenii</i>
Spectacle pod	<i>Cithyrea wislizenii</i>
Spiderwort, western	<i>Tradescantia occidentalis</i>
Snow-in-summer	<i>Cerastium tomentosum</i>
Sundrops	<i>Calyophus hartwegii</i>
Sunflower, Maximillan	<i>Helianthus maximilliani</i>
Valerian	<i>Centranthus ruber</i>
Verbena, fern	<i>Verbena bipinnatifida</i>
Verbena, fragrant sand	<i>Abronia fragrans</i>
Verbena, sand	<i>Tripterocalyx wootonii</i>
Winecups	<i>Callirhoe involucrata</i>
Yarrow	<i>Achillea lanulosa</i>
Yucca, banana	<i>Yucca baccata</i>
Yucca, soapweed	<i>Yucca glauca</i>
Zinnia, desert	<i>Zinnia grandiflora</i>

6. Butterfly- and Hummingbird-Attracting Flowers and Plants^a

Alyssum	<i>Alyssum saxatile</i>
Asters	<i>Aster spp.</i>
Bee balm	<i>Monarda spp.</i>
Bee plant	<i>Cleome serrulata</i>
Black-eyed susans	<i>Rudbeckia hirta</i>
Butterfly bush, dwarf	<i>Buddleia davidii</i>
Butterfly weed	<i>Asclepia tuberosa</i>
Catnip	<i>Nepeta cataria</i>
Cinquefoil or Potentilla	<i>Potentilla fruticosa</i>
Clover, New Mexico	<i>Wislizenia refracta</i>
Coneflowers	<i>Echinacea spp. or Ratibida spp.</i>
Coreopsis	<i>Coreopsis tinctoria</i>
Daisies	<i>Melampdium spp. or Machaeranthers spp.</i>
Desert marigold	<i>Baileya multiradiata</i>
Evening primrose	<i>Oenothera spp.</i>
Four-o-clocks	<i>Mirabilis multiflora</i>
Fruit trees	all types, adapted to cold/hot weather
Gaillardia	<i>Gaillardia aristata</i>
Gayfeather	<i>Liatris punctata</i>
Goldenrod	<i>Solidago canadensis</i>
Honeysuckle, native only	<i>Lonicera fragrantissima</i>
Hummingbird trumpet	<i>Anisacanthus thurberi or Zauschneria latifolia</i>
Indigo	<i>Amorpha fruticosa</i>
Indigo bush	<i>Dalea formosa</i>
Milkweed	<i>Asclepias spp.</i>
Mint	<i>Mentha arvensis</i>
Penstemon	<i>Penstemon spp.</i>
Roses	<i>Rosa spp.</i>
Sage	<i>Salvia spp.</i>
Sunflowers	<i>Helianthus spp.</i>
Trumpet vine	<i>Campsis radicans</i>
Yarrow	<i>Achillea lanulosa</i>
Yucca, soapweed	<i>Yucca glauca</i>

WATER

Be sure to provide a shallow water source too, that is either moving water such as a water feature or standing water that is changed out at least every other day to prevent disease transmission.

^a Ivey, Robert, 1995, *Plants of New Mexico*, 3rd Edition, published by the author, Rio Rancho, Albuquerque, NM, 504 pp.

Phillips, Judith, 1995, *Plants for Natural Gardens*, Museum of New Mexico Press, Santa Fe, 148 pp.

Doolittle, Rosalie, 1991, *Southwest Gardening*, University of New Mexico Press, Albuquerque, 222 pp.

7. Invasive Weeds of New Mexico

(see *New Mexico's Invasive Weeds*)

<u>Class A^a Weeds</u>	<u>Latin name</u>	<u>Origin</u>
Alfombrilla	<i>Drymaria arenarioides</i>	Mexico
Black Henbane	<i>Hyoscyamus niger</i>	Europe
Camelthorn	<i>Alhagi pseudalhagi</i>	Asia
Canada Thistle	<i>Cirsium arvense</i>	Eurasia
Dalmatian Toadflax	<i>Linaria genisitifolia</i> ssp. <i>dalmatica</i>	Europe
Diffuse Knapweed	<i>Centaurea diffusa</i>	Mediterranean
Dyer's Woad	<i>Isatis tinctoria</i>	Europe
Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>	Eurasia
Hoary Cress	<i>Cardaria draba</i>	Europe
Hydrilla	<i>Hydrilla verticillata</i>	South Africa
Leafy Spurge	<i>Euphorbia esula</i>	Eurasia
Onionweed	<i>Asphodelus fistulosus</i>	Mediterranean
Perennial Pepperweed	<i>Lepidium latifolium</i>	South Europe
Purple Loosestrife	<i>Lythrum salicaria</i>	Europe
Purple Starthistle	<i>Centaurea calcitrapa</i>	Europe
Scotch Thistle	<i>Onopordum acanthium</i>	Europe
Spotted Knapweed	<i>Centaurea maculosa</i>	Eurasia
Yellow Starthistle	<i>Centaurea solstitialis</i>	Europe
Yellow Toadflax	<i>Linaria vulgaris</i>	Eurasia
<u>Class B^b Weeds</u>		
African Rue	<i>Peganum harmala</i>	North Africa
Bull Thistle	<i>Cirsium vulgare</i>	Eurasia
Halogeton	<i>Halogeton glomeratus</i>	Asia
Malta Starthistle	<i>Centaurea melitensis</i>	Europe
Musk Thistle	<i>Carduus nutans</i>	South Europe
Russian Knapweed	<i>Acroptilon repens</i>	Eurasia
Poison Hemlock	<i>Conium maculatum</i> L.	Europe
Teasel	<i>Dipsacus fullonum</i>	Europe
<u>Class C^c Weeds</u>		
Field Bindweed	<i>Convolvulus arvensis</i> L.	Europe
Jointed Goatgrass	<i>Aegilops cylindrica</i>	South Europe
Russian Olive	<i>Elaeagnus angustifolia</i> L.	Europe
Saltcedar	<i>Tamarix</i> sp.	Europe
Siberian Elm	<i>Ulmus pumila</i>	Europe

[Lee, Richard D., 1999, *New Mexico's Invasive Weeds*, College of Agriculture and Home Economics, Cooperative Extension Service, New Mexico State University, Las Cruces, NM, 57 pp.]
 [NMSU Extension Services 505/646-3015; NM Dept of Agriculture 505/646-2642]

ⁱ Degenhard, W.G., Painter, C.W. and Price, A.H., 1996, *Amphibians & Reptiles of New Mexico*, University of New Mexico Press, Albuquerque, NM, 431 pp.

ⁱⁱ Santa Fe Botanical Garden, 2001, *Newsletter*, Summer, p. 1

^a Class A Weeds are defined as not native to a particular ecosystem, and with limited distribution within the state. These are primarily weeds waiting to invade New Mexico.

^b Class B Weeds are defined as not native to a particular ecosystem, and are currently limited to a particular area of the state. These are primarily weeds already in New Mexico, but able to still be controlled by prevention.

^c Class C Weeds are defined as not native to a particular ecosystem, yet are widespread throughout the state. These are weeds that require long-term programs of management and suppression.

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- ⁱⁱⁱ Doxon, L.E., 1999, *High Desert Yards & Gardens*, University of New Mexico Press, Albuquerque, NM, 230 pp.
- ^{iv} Williams, J.L., 1986, *New Mexico in Maps*, 2nd Ed., University of New Mexico Press, Albuquerque, NM, 407 pp.
- ^v Doxon p. 1-14
- ^{vi} Doxon p.2
- ^{vii} deBuys, William, 1985, *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range*, University of New Mexico Press, Albuquerque, NM, 394 pp.
- ^{viii} Doxon p. 32-33