

AGENDA

MEETING OF THE BOARD OF DIRECTORS' COMMUNICATIONS COMMITTEE AND/OR OF THE BOARD OF DIRECTORS

SAN ANTONIO RIVER AUTHORITY

August 27, 2009, 10:00 a.m.

**Estimated Presentation Time: 1.5 hours*



GENERAL AND CEREMONIAL ITEMS:

**Estimated Presentation Time: 10 minutes*

1. CALL TO ORDER BY THE CHAIRMAN, MR. ROBERTO G. RODRÍGUEZ

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL BY THE SECRETARY, MR. NÁZIRITE RUBÉN PÉREZ

Terry E. Baiamonte

Sally Buchanan

John J. Flieller

Jeffrey S. Neathery

Názirite Rubén Pérez

Roberto G. Rodríguez

4. CERTIFICATION OF A QUORUM BY THE SECRETARY

5. INTRODUCTION OF VISITORS

6. CITIZENS TO BE HEARD

**Represents estimated presentation times of staff and routine Board member items; does not account for Board member discussions that may occur.*

7. **APPROVAL OF THE MINUTES OF THE COMMUNICATIONS COMMITTEE MEETING HELD ON APRIL 28, 2009**
8. **BRIEFING ON SAN ANTONIO RIVER AUTHORITY SPONSORSHIPS, COMMUNITY AND MEDIA ACTIVITIES**
9. **STATUS REPORT ON THE WESTSIDE CREEKS RESTORATION PROJECT**
10. **PRESENTATION AND DISCUSSION ON THE SAN ANTONIO RIVER AUTHORITY CREEK BOOK PROJECT**
11. **PRESENTATION AND DISCUSSION REGARDING THE SAN ANTONIO RIVER AUTHORITY'S ROLE AS THE GOLIAD FLOTILLA EVENT HOST**
12. **PRESENTATION AND DISCUSSION REGARDING REVISIONS TO THE SAN ANTONIO RIVER AUTHORITY'S QUARTERLY RIVER REACH NEWSLETTER**
13. **PRESENTATION AND DISCUSSION REGARDING REVISIONS TO THE SAN ANTONIO RIVER AUTHORITY'S WEB SITES**
14. **REVIEW AND DISCUSSION OF CONSULTANT SELECTION ACTIVITIES AND/OR CONSULTANT CONTRACT AUTHORIZATION, RENEWALS, AMENDMENTS OR EXTENSIONS:**
 - **PROFESSIONAL SERVICES CONTRACT FOR THE SAN ANTONIO RIVER IMPROVEMENTS PROJECT MUSEUM REACH 2010 EVENT OPPORTUNITIES REQUEST FOR PROPOSAL (RFP)**
 - **PROFESSIONAL SERVICES CONTRACT FOR THE MUSEUM REACH HOLIDAY REQUEST FOR PROPOSAL (RFP)**
15. **STATUS REPORT ON THE 75 YEARS OF SARA SERVICE PROJECT, INCLUDING DISCUSSION OF GRANT APPLICATION STATUS**
16. **GENERAL MANAGER'S REPORT**
 - **UPCOMING EVENTS CALENDAR,**
 - **FUTURE BOARD AND/OR COMMITTEE MEETINGS, AND**
 - **MEETINGS INVOLVING THE ATTENDANCE OF ONE OR MORE BOARD MEMBERS.**
17. **ADJOURN**

Estimated Presentation Time: 1.5 Hours

SAN ANTONIO RIVER AUTHORITY
General Statements

This meeting is wheelchair accessible. Accessible parking is located at 100 E. Guenther St. Requests for an interpreter for the hearing impaired must be received at least 48 hours prior to the meeting, or, to arrange for special assistance to attend this meeting, please call the Operator at 210-227-1373.

The Board of Directors' Communication Committee and/or the Board of Directors of the San Antonio River Authority may discuss and/or take action on any item listed in this agenda while convened in open session. The Board of Directors' Communication Committee and/or the Board of Directors of the San Antonio River Authority may also meet in Executive Session, pursuant to Section 551.071 of the Texas Government Code, to receive advice from legal counsel on any item listed in this agenda.

Communications Committee

7.

Date: 08/27/2009

Approval of the Minutes

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Submitted For: Suzanne B. Scott

Department:

Information

CAPTION

**APPROVAL OF THE MINUTES OF THE COMMUNICATIONS COMMITTEE
MEETING HELD ON APRIL 28, 2009**

Presenter

Mr. Rodríguez, Committee Chairman

Recommendation

Motion to approve the minutes of the Communications Committee meeting held on April 28, 2009, as presented.

Discussion

Vote

Attachments

Link: [April 28, Minutes Draft](#)

MINUTES

MEETING OF THE BOARD OF DIRECTORS' COMMUNICATIONS COMMITTEE

SAN ANTONIO RIVER AUTHORITY

April 28, 2009, 1:00 p.m.



GENERAL AND CEREMONIAL ITEMS:

1. **CALL TO ORDER WAS MADE BY THE CHAIRMAN, MR. ROBERTO RODRÍGUEZ AT 1:03 PM**
2. **PLEDGE OF ALLEGIANCE WAS CONDUCTED**
3. **ROLL CALL WAS PERFORMED BY THE SECRETARY, MR. NÁZIRITE RUBÉN PÉREZ, AND ALL COMMITTEE MEMBERS PRESENT WERE AS FOLLOWS:**

- Terry E. Baiamonte
- Sally Buchanan
- John J. Flieller
- Jeffrey S. Neathery
- Názirite Rubén Pérez
- Roberto G. Rodríguez

4. **CERTIFICATION OF A QUORUM WAS ANNOUNCED BY MR. PÉREZ**

5. **INTRODUCTION OF VISITORS**

Ms. Bishop announced the visitors present.

6. **CITIZENS TO BE HEARD**

Ms. Bishop announced that there were no citizens signed up to speak.

7. **APPROVAL OF THE MINUTES OF THE COMMUNICATIONS COMMITTEE MEETING HELD ON JANUARY 28, 2009**

Staff recommended a motion to approve the minutes of the Communications Committee meeting held on January 28, 2009, as presented to the Committee.

Motion by Sally Buchanan
Seconded by Jeffrey S. Neathery
Motion passed unanimously

INDIVIDUAL AGENDA ITEMS:

8. INTRODUCTION OF GRAPHIC DESIGNER, CLINT MARZEC

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 9.

9. PRESENTATION REGARDING THE CAPITAL DEVELOPMENT PLANS FOR THE WITTE MUSEUM INCLUDING THE CREATION OF THE CENTER FOR RIVERS & AQUIFERS

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 10.

10. PRESENTATION, DISCUSSION, AND APPROPRIATE ACTION REGARDING THE PROPOSED 75 YEARS OF SARA SERVICE PROJECT, INCLUDING AUTHORIZATION TO APPLY FOR A NATIONAL HISTORICAL PUBLICATIONS & RECORDS COMMISSION GRANT

Staff recommended a motion supporting presentation to the Board of Directors for approval of an application to the National Historical Publications & Records Commission for up to \$200,000 in grant funding to create and make public SARA's Urban Watershed Management System Archives Collection; and, should the grant funds not be awarded to SARA, supporting presenting to the Board of Directors a budget amendment to fund year 1 of the Urban Watershed Management System Archives Collection development.

Mr. Neathery moved that the Board direct staff to apply for the grant and to continue to look at dove-tailing 75th anniversary events onto existing events throughout the basin.

Seconded by Sally Buchanan
Motion passed unanimously

11. PRESENTATION OF THE PROPOSED PROJECT REQUESTS FOR THE SAN ANTONIO RIVER AUTHORITY'S INTERGOVERNMENTAL & COMMUNITY RELATIONS DEPARTMENT

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 12.

12. PRESENTATION OF THE SCHEDULE OF EVENTS AND PUBLIC OUTREACH ACTIVITIES ASSOCIATED WITH THE MAY 30-31, 2009 MUSEUM REACH GRAND OPENING CELEBRATION

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 13.

13. PRESENTATION REGARDING THE MISSION REACH EDUCATIONAL OUTREACH PROGRAM

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 14.

14. STATUS REPORT ON THE WESTSIDE CREEKS RESTORATION PROJECT

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 15.

15. BRIEFING ON SAN ANTONIO RIVER AUTHORITY SPONSORSHIPS AND COMMUNITY AND MEDIA ACTIVITIES

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 16.

16. GENERAL MANAGER'S REPORT

- UPCOMING EVENTS CALENDAR,
- FUTURE BOARD AND/OR COMMITTEE MEETINGS,
- MEETINGS INVOLVING THE ATTENDANCE OF ONE OR MORE BOARD MEMBERS.

There being no action taken on this item, Mr. Rodríguez called for Agenda Item 17.

17. ADJOURN

There being nothing further to report, Ms. Buchanan moved to adjourn, and therefore, Mr. Rodríguez called the meeting adjourned at 3:38 p.m.

PREPARED AND RECOMMENDED FOR APPROVAL BY THE MANAGER.

SUZANNE B. SCOTT, General Manager

APPROVED BY THE BOARD OF DIRECTORS' COMMUNICATIONS COMMITTEE AT THE MEETING HELD ON AUGUST 27, 2009.

ROBERTO G. RODRÍGUEZ, Chairman

ATTEST:

NÁZIRITE RUBÉN PÉREZ, Committee Secretary

Communications Committee

8.

Date: 08/27/2009

Sponsorships, Community & Media Activities

Submitted By: Lupe Moreno, Executive
Offices

Division: Intergovernmental and
Comm Relations

Submitted For: Steven Schauer

Department:

Information

CAPTION

**BRIEFING ON SAN ANTONIO RIVER AUTHORITY SPONSORSHIPS,
COMMUNITY AND MEDIA ACTIVITIES**

Presenter

Steven Schauer

Estimated Presentation Time: 5 minutes

Staff will discuss the attached list of sponsorships and calendar of community and media activities for April - June 2009.

Discussion

Attachments

Link: [April-June Sponsorships](#)

Link: [April-June Calendar](#)

**Fiscal Year 2008/09 Sponsorships
For the period April 2009 – June 2009**

Month	Recipient and/or Event	Sponsorship Amount or Service
April	West San Antonio Chamber of Commerce	8 th Annual State of the District
	Los Compadres de SA Missions	18 th Annual Make It Your Mission Celebration
May	Greencamp San Antonio	1 st Annual Greencamp San Antonio
	Karnes Co. Economic Development	Karnes Co. Economic Development Breakfast
	Texas State University	Regional Water Quality Forum – Key note speaker fee
	Greater SA Chamber	2009 Congressional Series Featuring Lamar Smith
	Karnes City Chamber of Commerce	Karnes City “Tour de Karnes” Bike ride
	Gardening Volunteers of S. Tx.	WaterSaver Landscape Contest Underwriting
	Canoe Trail Goliad	Summer Flotilla Invite
June	Greater SA Chamber of Commerce	Lamar Smith Luncheon 2009
	SA City Exceptional	2 pgs. in publication
	Canoe Trail Goliad	Canoe Trail Goliad Summer Flotilla Lunch
	South SA Chamber of Commerce	13 th Annual State of District Luncheon Honoring Sen. Carlos Uresti

April 2009

April 2009							May 2009						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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5	6	7	8	9	10	11	3	4	5	6	7	8	9
12	13	14	15	16	17	18	10	11	12	13	14	15	16
19	20	21	22	23	24	25	17	18	19	20	21	22	23
26	27	28	29	30			24	25	26	27	28	29	30
							31						

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
March 30 11:00am 2:00pm Fresh Air Friday (main plaza downtown) 4:00pm 5:00pm Museum Reach Q&A w/ Nine Banded Productions	31 8:00am 9:15am FW: Chamber of Commerce Legislative committee (McDermott Briefing Center in our downtown office, located at 602 E. Commerce)	April 1 9:30am 10:30am River Rising-Witte (IGCR Calendar)	2 9:00am 10:30am IG - Attend COSA City Council meeting 6:00pm 10:00pm S - Make it Your Mission Event	3 8:30am 4:30pm IG - Meeting with Shelly Botkin, Senate NRC staff, and Allen regarding bills 9:00am 11:30am Updated: Guided Hikes (SA Natural Areas) 11:30am 1:30pm Fresh Air Friday (Main Plaza) 11:30am 12:00pm MR - Provide Museum Reach info to SA Woman Magazine	4
6 8:30am 10:30am FW: Updated: Bexar Regional Watershed Management Team Meetings (TBD) 10:30am 11:30am Attended Brackenridge Park Conservancy Board Meeting	7 IG - House NRC Hearing 9:00am 9:30am Kens 5 requested info on Calaveras Dam #6 5:30pm 7:00pm FW: Updated: Apache Creek Subcommittee (Guadalupe Street Coffee Shop; 1320 Guadalupe Street (78207))	8 9:00am 11:30am Guided Hikes (SANA) 9:30am 10:30am River Rising-Witte (IGCR Calendar) 10:30am 11:30am Attended Canoe Trail Goliad Board Meeting 4:00pm 4:30pm Interview w/ KSAT on land swap for Mission Reach	9 8:00am 5:00pm IG - Sunset Hearing 9:00am 11:30am Guided Hike (SANA) 2:00pm 3:00pm SARIP Presentation for Denver Post 3:00pm 3:30pm KENS interview re: Brackenridge Cleanup 6:30pm 8:00pm CR - La Vernia City Council Meeting	10	11
13 10:00am 10:30am MR - Brackenridge Park clean up media event 2:00pm 3:00pm MR - WCROC media event 2:00pm 3:00pm Updated: WCROC Press Conference (Escobar Park) 4:00pm 4:30pm MR - Provide SARIP info to SABJ	14 8:00am 3:00pm Environmental Fair (Jordan Intermediate) 10:00am 10:30am Express-News Interview re: Mission Reach 1:30pm 2:30pm IG - Councilwoman Cisneros Meeting 6:00pm 8:00pm FW: WCROC Meetings (SARA)	15 8:00am 4:00pm EDU - NISD Environmental Fair 9:00am 10:00am Canceled: River Rising-Witte (IGCR Calendar)	16 IG - Austin for Senate and House NRC Hearings. Also 8:00am 4:00pm EDU - NISD Environmental Fair	17 8:00am 5:00pm Bathtubs To Basins (Longs Creek Elementary) 8:00am 8:30am Provide SARIP info to Express-News 11:30am 12:00pm Set up KENS Sunday Morning Interview	18 8:30am 11:30am Updated: Guided Hike Series (Braunig, Jackson, Calaveras) 10:00am 4:00pm Earthday (Woodlawn Lake) 10:00am 4:00pm Updated: Confirmed: Westside Creeks 1st Community Workshop (Woodlawn Lake Gymnasium (11 19 7:15am 8:00am Updated: KENS interview (5400 Fredericksburg Rd.)
20 9:00am 11:30am Guide Hike (SANA)	21	22 IG - Brief Water Caucus 9:00am 2:00pm Updated: Earth Day @UTSA 1604 (Vehicle 0610 Escape - Guenther) 9:30am 10:30am River Rising-Witte (IGCR Calendar)	23 9:00am 2:00pm Earth Day @ USAA (USAA; 9800 Fredericksburg Rd., SA TX 78288) 9:00am 11:30am Guided Hike (SANA) 9:00am 10:30am MR - Museum Reach Walking Tour w/ Judge & Mayor 2:00pm 3:00pm MR - Meet w/ Express-News re: Mission Reach	24	25 8:30am 2:00pm National Project for Excellence in Environmental Education and the Texas Association of Environmental Education (UTSA, 1604 Campus)
27 10:00am 11:00am CR - IDA Conference SARIP presentation 10:30am 1:00pm SARIP presentation and tour for Mayor & Council from Red Deer, Canada	28 5:30pm 6:00pm News Release re: Mission Reach stimulus funding	29 8:00am 9:00am IG - Chamber of Commerce Water Committee meeting 9:30am 10:30am Updated: River Rising-Witte (IGCR Calendar; Vehicle 0608 Escape - Guenther) 3:00pm 5:00pm EAC Meeting (Witte Museum 'Ruiz House')	30 11:00am 11:30am Express-News questions re: lock and dam 4:00pm 5:00pm Express-News interview re: Museum Reach	May 1 8:30am 3:30pm IG - E-Flows Budget meetings 9:00am 11:00am KENS interview w/ Mayor Hardberger at Museum Reach 2:00pm 2:30pm Provide Express-News info re: lock and dam	2 3

May 2009

May 2009							June 2009						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30				
31													

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
<p>May 4</p> <p>8:30am 10:30am FW: Updated: Bexar Regional Watershed Management Team Meetings (TBD)</p> <p>2:30pm 3:00pm Museum Reach info to Express-News</p> <p>6:00pm 7:30pm Updated: Martinez Creek Subcommittee Meeting (Bihl House Arts; 2803 Fredericksburg Road (78201))</p>	<p>5</p> <p>Updated: Nature Venture (G.T.) (McGimsey Boy Scout park)</p> <p>5:30pm 7:00pm FW: Updated: Apache Creek Subcommittee (Guadalupe Street Coffee Shop; 1320 Guadalupe Street (78207))</p>	<p>6</p> <p>9:30am 10:30am River Rising-Witte (IGCR Calendar)</p> <p>11:30am 1:00pm CR - SARIP presentation to Transportation Association</p> <p>2:00pm 4:00pm IG - Illegal Dumping Summit</p> <p>6:00pm 7:30pm Updated: Alazan Creek Subcommittee Meeting (Crockett Elementary Library; 2215 Morales Street (78207))</p>	<p>7</p> <p>1:00pm 2:30pm Career Day (Collier Elementary)</p> <p>4:00pm 4:30pm Museum Reach info to Express-News</p>	<p>8</p> <p>7:00am 8:00am S - Karnes County ED 2nd Friday Breakfast</p> <p>9:00am 11:30am Guided Hike (SANA)</p> <p>1:00pm 1:30pm Provide pre-construction Museum Reach images to EN</p> <p>2:30pm 4:30pm Updated: WOAI TV Museum Reach tour</p>	<p>9</p> <p>8:00am 4:00pm CR - Museum Reach event volunteer training</p> <p>8:00am 2:00pm Greencamp San Antonio (Pearl Brewery)</p> <p>8:30am 4:30pm GreenCamp San Antonio @ The Historic Pearl Brewery (The Hist</p>
<p>11</p> <p>8:30am 9:30am MR - Express-News audio taping</p>	<p>12</p> <p>8:00am 2:00pm IG - Senate NRC Hearing</p> <p>6:00pm 8:30pm CR - SARIP presentation to Roosevelt Corridor Meeting</p> <p>6:00pm 8:00pm FW: WCROC Meetings (SARA)</p>	<p>13</p> <p>TCEQ Environmental Trade Fair & Conference</p> <p>9:30am 10:30am River Rising-Witte (IGCR Calendar)</p> <p>1:30pm 2:00pm MR - SARIP info to Philadelphia Inquirer</p> <p>6:00pm 7:30pm San Pedro Creek Subcommittee (San Antonio River Authority; 100 E. Guenther (78204))</p>	<p>14</p> <p>2:00pm 3:00pm MR - EN Interview w/ Tracy Hamilton</p> <p>3:00pm 3:30pm MR - Museum Reach interview for WOAI</p> <p>3:30pm 4:00pm MR - provide SARIP info to freelance writer</p> <p>6:00pm 7:30pm Apache Creek Subcommittee Meeting (Guadalupe Cultural Arts Theatre; 1301 Guadalupe St. (78207))</p>	<p>15</p> <p>9:00am 10:00am MR - Museum Reach refilling of the river event</p> <p>12:30pm 3:00pm Career Day (Washington Elementary)</p>	<p>16</p> <p>8:00am 4:00pm CR - Museum Reach event volunteer training</p> <p>2:00pm 4:00pm Girls Inc. (1209 S. St. Mary's)</p>
<p>18</p> <p>11:30am 12:30pm MR - WOAI Living Show museum reach tour</p> <p>1:00pm 2:00pm MR - Interview w/ reporter from Philadelphia Inquirer</p> <p>2:00pm 3:00pm MR - Interview w/ EN Tracy Hamilton re: SARIP funding</p> <p>3:00pm 3:30pm MR - Interview w/ EN re: Museum Reach landscaping</p> <p>5:00pm 7:00pm CR - SAROC meeting</p>	<p>19</p> <p>11:00am 1:00pm MR - AP Tour of Museum Reach</p>	<p>20</p> <p>9:30am 10:30am River Rising-Witte (IGCR Calendar)</p> <p>10:30am 12:00pm MR - EN Museum Reach Media tour</p> <p>11:00am 11:30am MR - WOAI interview re: stimulus funding</p> <p>12:00pm 12:30pm MR - Provide info re: ADA access along Museum Reach to EN</p> <p>12:30pm 1:00pm MR - Provide KSAT info re: Museum Reach bats</p> <p>1:00pm 1:30pm MR - Provide EN info re: Museum Reach landscaping</p> <p>1:30pm 2:00pm MR - Provide Victoria Advocate</p>	<p>21</p> <p>9:00am 10:00am CR - SARIP presentation to Realtors group</p> <p>11:30am 1:30pm Updated: Media Tour of Museum Reach</p> <p>1:30pm 2:00pm MR - Provide SARIP info to freelance writer</p> <p>2:00pm 2:30pm MR - Provide EN info re: Mission Reach</p> <p>2:30pm 3:00pm MR - Provide KENS info re: Braunig/Calaveras Lakes and CPS Energy</p>	<p>22</p> <p>8:30am 9:30am MR - Mission Reach tour for EN</p> <p>11:00am 11:30am MR - KENS interview re: Brauning and Calaveras</p> <p>12:00pm 12:30pm MR - Provide Museum Reach landscaping info to EN</p>	<p>23</p>
<p>25</p>	<p>26</p> <p>12:00pm 12:30pm MR - Provide EN info re: Museum Reach landscaping</p> <p>1:00pm 1:30pm MR - Provide EN Weekender info re: Museum Reach opening</p> <p>3:00pm 3:30pm WOAI-Interview (Overlook at Brooklyn)</p> <p>6:00pm 8:00pm CR - Museum Reach event volunteer training</p> <p>7:00pm 8:30pm Updated: Leon Creek Masterplan Public Meeting #1 (Helotes Elementary, 13878 Riggs Rd., Helotes, TX 78023)</p>	<p>27</p> <p>7:00am 7:30am MR - Call KTSA for Museum Reach interview</p> <p>11:30am 1:00pm CR - SARIP presentation to rotary club of sa</p> <p>6:00pm 8:00pm MR - Museum Reach Tweet-Up</p>	<p>28</p> <p>6:00am 9:30am MR - KABB Morning News Live Interviews re: Museum Reach</p>	<p>29</p> <p>5:30am 8:00am MR - WOAI live morning interviews re: Museum Reach event</p> <p>9:00am 9:30am MR - Mayor's Lock and Dam event</p>	<p>30</p> <p>8:00am 6:00pm Museum Reach Grand Opening Celebration (Brooklyn Ave.)</p> <p>7:00am 1:00pm Museum Reach Grand Opening (Pearl Brewery)</p>
<p>June 1</p> <p>8:00am 12:00pm EDU - Jr. Angler's Clinic</p> <p>8:30am 10:30am FW: Updated: Bexar Regional Watershed Management Team Meetings (TBD)</p> <p>11:30am 1:00pm S - Lamar Smith Congressional Luncheon</p> <p>6:00pm 7:30pm Updated: Martinez Creek Subcommittee Meeting (Bihl House Arts; 2803 Fredericksburg Road (78201))</p>	<p>2</p> <p>8:00am 12:00pm EDU - Jr. Angler's Clinic</p> <p>5:30pm 7:00pm FW: Updated: Apache Creek Subcommittee (Guadalupe Street Coffee Shop; 1320 Guadalupe Street (78207))</p> <p>6:00pm 7:30pm Apache Creek Subcommittee Meeting (Guadalupe Cultural Arts Theatre; 1301 Guadalupe St. (78207))</p> <p>7:00pm 8:30pm Updated: Leon Creek Masterplan Public Meeting #2 (Leon Springs Elementary, 23881 W. IH-10, San Antonio, TX 78257)</p>	<p>3</p> <p>8:00am 12:00pm EDU - Jr. Angler's Clinic</p> <p>6:00pm 7:30pm Updated: Alazan Creek Subcommittee Meeting (Crockett Elementary Library; 2215 Morales Street (78207))</p>	<p>4</p> <p>8:00am 12:00pm EDU - Jr. Angler's Clinic</p> <p>6:30pm 8:30pm Updated: BRWM Flood Control Public Workshop (Harlandale Civic Center, 115 W Southcross, 78221)</p>	<p>5</p> <p>8:00am 12:00pm EDU - Jr. Angler's Clinic</p>	<p>6</p> <p>9:00am 2:00pm 2nd Annual Goliad Summer Flotilla (Goliad, Tx.)</p> <p>10:30am 12:30pm Updated: BRWM Flood Control Public Workshop (Somerset Multi-purpose Center, 19375 K St., 78069)</p>

June 2009 - July 2009

June 2009							July 2009						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	29	30					26	27	28	29	30	31	

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
June 8 8:00am 12:00pm EDU - Jr. Angler's Clinic 9:00am 11:30am CR - SARA DFIRM Presentation (Wilson County Commissioners Court) 1:30pm 3:00pm MR - Express-News photo shoot along Museum Reach	9 8:00am 12:00pm EDU - Jr. Angler's Clinic 2:00pm 2:30pm IG - Meeting w/ Councilman Lopez, District 6 and COS Gerald Lopez 6:00pm 8:00pm FW: WCROC Meetings (SARA)	10 8:00am 12:00pm EDU - Jr. Angler's Clinic 6:00pm 7:30pm San Pedro Creek Subcommittee (San Antonio River Authority; 100 E. Guenther (78204))	11 8:00am 12:00pm EDU - Jr. Angler's Clinic	12 8:00am 12:00pm EDU - Jr. Angler's Clinic	13
15 8:00am 12:00pm EDU - Jr. Angler's Clinic 6:30pm 8:30pm Updated: BRWM Flood Control Public Workshop (Shavano Park City Hall, 900 Saddletree Ct., 78231)	16 8:00am 12:00pm EDU - Jr. Angler's Clinic 6:00pm 8:00pm CR - Kenedy City Council Meeting DFIRM Presentation 6:00pm 8:00pm WCROC Meetings-CHANGED FOR JUNE	17 8:00am 12:00pm EDU - Jr. Angler's Clinic 6:30pm 8:30pm Updated: Calaveras 6 Dam Rehabilitation Project Public Meeting (Heritage Middle School, 8004 New Sulphur Springs Rd., 78263)	18 Updated: TWCA Mid-Year Conference (Galveston -- Moody Gardens) 8:00am 12:00pm EDU - Jr. Angler's Clinic 11:30am 1:00pm CR - Museum Reach Urban Segment Presentation to NW Rotary Club	19 8:00am 12:00pm EDU - Jr. Angler's Clinic 11:30am 1:00pm CR - SARIP Presentation to Stone Oak Rotary Club	20 10:00am 11:30am Updated: Groundbreaking Crofton & Constance Park
22 8:00am 12:00pm EDU - Jr. Angler's Clinic 2:00pm 3:00pm MR - Meet w/ EN re: Mission Reach	23 8:00am 12:00pm EDU - Jr. Angler's Clinic 9:00am 11:00am IG - Museum Reach Barge Tour for COSA River Commission 1:00pm 1:30pm MR - Respond to WOAI open records request re: lobbying 2:00pm 2:30pm MR - Provide Museum Reach algae info to WOAI 3:00pm 3:30pm MR - Provide EN info re: BRWM	24 8:00am 12:00pm EDU - Jr. Angler's Clinic 8:00am 9:00am IG - Chamber Water Committee meeting 9:30am 10:30am MR - Express-News interview re: Government Canyon and Leon Creek Study	25 8:00am 12:00pm EDU - Jr. Angler's Clinic 9:00am 12:30pm MR - EN Museum/Mission tour 1:30pm 2:00pm MR - Provide Northcentral Times info re: DFRIMs and NFIP 6:00pm 8:00pm Updated: Mission Reach Public Meeting I (Roosevelt Park Community Center, 331 Roosevelt, 78210)	26 8:00am 12:00pm EDU - Jr. Angler's Clinic 11:00am 1:30pm Updated: South Chamber Luncheon for Senator Uresti (Hyatt Regency)	27
29 8:00am 12:00pm EDU - Jr. Angler's Clinic 1:30pm 2:00pm MR - Provide KSAT Mission Reach info	30 8:00am 12:00pm EDU - Jr. Angler's Clinic 9:00am 9:30am IG - Councilwoman Chan briefing 5:30pm 7:30pm Mayor and City Council reception (Museo Alameda, 101 S. Santa Rosa) 6:30pm 8:30pm Updated: Special BRWM Public Meeting - Indian Creek Community (Indian Creek Elementary School, 5830 Old Pearsall Rd, 78242)	July 1 11:30am 1:00pm S - Chamber of Commerce Luncheon for Ciro Rodriguez 6:00pm 7:30pm Updated: Alazan Creek Subcommittee Meeting (Crockett Elementary Library; 2215 Morales Street (78207)) 6:30pm 8:30pm Updated: BRWM Public Workshop (Woodlawn Theater, 1920 Fredericksburg Rd.)	2	3	4
6 8:30am 10:30am FW: Updated: Bexar Regional Watershed Management Team Meetings (TBD) 10:00am 12:00pm MR - Museum Reach Tour w/ Texas Architect Magazine	7 12:00pm 1:30pm MR - KSAT interview re: Museum Reach algae 5:30pm 7:00pm FW: Updated: Apache Creek Subcommittee (Guadalupe Street Coffee Shop; 1320 Guadalupe Street (78207)) 6:00pm 7:30pm Apache Creek Subcommittee Meeting (Guadalupe Cultural Arts Theatre; 1301 Guadalupe St. (78207))	8 Water:A Living Lesson Educator's Conference 6:00pm 8:00pm Updated: Mission Reach Public Meeting II (Southton Road Service Center, 9874 Southton Rd., 78223) 6:00pm 7:30pm San Pedro Creek Subcommittee (San Antonio River Authority; 100 E. Guenther (78204))	9 Water:A Living Lesson Educator's Conference 9:30am 12:30pm MR - Tour of Museum Reach for Green Connections Show	10 Water:A Living Lesson Educator's Conference	11
					12

Date: 08/27/2009

Westside Creeks Status Report

Submitted By: Rudy Farias, Operations

Division: Operations

Submitted For: Rudy Farias

Department: Water Resources &
Community Dvlpmnt

Information

CAPTION

STATUS REPORT ON THE WESTSIDE CREEKS RESTORATION PROJECT

Presenter

Rudy R. Farias

Estimated Presentation Time: 5 minutes

Since the April 28, 2009 Communications Committee Meeting, work on the Westside Creeks Restoration Project, Conceptual Design Phase has focused on developing two alternative concepts for each of the Creeks, introducing the technical aspects of the plan, and keeping the project in the forefront for potential funding opportunities.

In May the oversight committee reviewed the public input, and with input from each of the subcommittees, validated the workshop data. The oversight committee also forwarded a recommendation to VIA that they consider placing a Bus Rapid Transit (BRT) station near Martinez Creek at Fredericksburg Road.

In June each of the subcommittees toured their respective Creek and at the oversight committee meeting the committee received an introduction to the technical aspects of the plan, such as geomorphology and hydraulics and hydrology. The committee was also briefed on ongoing stockholder interviews being conducted by the consultant team.

In July the subcommittees received a briefing and had an open dialogue with a representative from the San Antonio Police Department regarding public safety along the creeks. At the oversight committee meeting, the committee received a briefing on public safety from the Park Police commander, learned about safety through design from the consultant team, and received a presentation from former Mayor Howard Peak on the City's Linear Creeks Advisory Board and their activities.

In August the subcommittees and oversight committee took a summer recess while the consultant team prepared for the upcoming September design team work sessions. These work sessions will occur during the week of August 31 – September 4 and will allow the subcommittees and oversight committee members the opportunity to further refine the concept alternatives that will be presented to the public in October. Also in August the project was presented to the Westside Tax Increment Financing Zone Board Members.

Discussion

Attachments

Link: [Attached Schedule](#)



MON, August 31

6:30 - 8:30 p.m.
Martínez Creek

TUES, September 1

8:00 - 10:00 a.m.
Alazán Creek

(Continental breakfast, please RSVP)

6:00 - 8:00 p.m.
Apache Creek

WED, September 2

6:00 - 8:00 p.m.
San Pedro Creek

THURS, September 3

6:00 - 8:00 p.m.
Oversight Committee

FRI, September 4

8:00 - 10:00 a.m.
OPEN HOUSE

Come see the results of a week of planning work sessions!

September Design Team Work Sessions

Monday, August 31 — Friday, September 4

Guadalupe Cultural Arts Center

1300 Guadalupe Street

San Antonio, TX 78207

As part of the Westside Creeks Restoration Project—Conceptual Design Phase, the San Antonio River Authority (SARA) invites you to participate in the **DESIGN TEAM WORK SESSIONS** currently scheduled for **August 31, 2009 through September 4, 2009**.

The design team work sessions will allow members of the oversight committee and various subcommittees the opportunity to comment on the draft framework plan for each of the creeks, catalyst sites (sites with potential for redevelopment), and draft designs for each of the identified catalyst sites.

HELP PLAN THE FUTURE OF LOS ARROYOS

—Come work side by side with our consultant team to ensure the plans to restore the creeks represent a shared community vision. Express yourself with markers on Mylar for the Westside creeks.

COME TO ONE, COME TO ALL—While the work sessions are tailored for the subcommittees and the oversight committee, everyone from the community is invited to attend any or all of the work sessions, *pass it on*.

ABOUT THE PROJECT

The Westside Creeks Restoration Project is a community-based planning effort initiated by the SARA to:

- Restore the environmental condition of the Alazán, Apache, Martínez, and San Pedro Creeks,
- Maintain the current flood control components of the creeks, and
- Provide increased opportunities for people to enjoy these urban creeks.

For more information or to RSVP, please contact Linda Vela at (210) 785-0888 or via email at vela@rjrivera.com.

For project information, visit us at www.westsidecreeks.com.





LUNES, 31 DE AGOSTO

6:30 - 8:30 p.m.
Arroyo Martínez

MARTES, 1 DE SEPTIEMBRE

8:00 - 10:00 a.m.
Arroyo Alazán

(Habrá desayuno, por favor llame si va atender para asegurar su desayuno)

6:00 - 8:00 p.m.
Arroyo Apache

MIÉRCOLES, 2 DE SEPTIEMBRE

6:00 - 8:00 p.m.
Arroyo San Pedro

JUEVES, 3 DE SEPTIEMBRE

6:00 - 8:00 p.m.
Comité general

VIERNES, 4 DE SEPTIEMBRE

8:00 - 10:00 a.m.

*Exhibiciones del Trabajo
Venga a ver los resultados de una
semana de sesiones de trabajo y
planificación.*

Sesiones de trabajo en septiembre con el equipo de diseño

lunes, 31 de agosto ha viernes, 4 de septiembre
Guadalupe Cultural Arts Center
1300 Guadalupe Street
San Antonio, TX 78207

Como parte de la fase de diseño conceptual del proyecto de restauración de los arroyos del Westside, el San Antonio River Authority (SARA) le invita a que participe en **SESIONES DE TRABAJO CON EL EQUIPO DE DISEÑO** del 31 de agosto al 4 de septiembre.

Las sesiones de trabajo con el equipo de diseño permitirá que miembros del comité general y los varios subcomités tengan la oportunidad de comentar sobre el plan de estructura para cada de los arroyos, sitios catalíticos (o sitios con el potencial de desarrollo nuevo), y los diseños preelminaros para cada de los sitios catalíticos.

AYUDA HA PLANEAR EL FUTURO DE LOS ARROYOS — Venga y trabaje al lado del equipo de consultantes para asegurar que los planes para restaurar los arroyos representan una visión comunitaria. Venga y exprese sus ideas con marcadores para los arroyos del Westside.

VENGA HA UNO, VENGA HA TODOS — Mientras las sesiones de trabajo están diseñadas para los subcomités y el comité general, la comunidad está invitada ha uno o ha todas las sesiones de trabajo, inviten a otros.

SOBRE EL PROYECTO

El proyecto de restauración de los arroyos del Westside es un esfuerzo de planificación basado en la comunidad y iniciado por SARA para:

- Restaurar la condición ambiental de los arroyos Alazán, Apache, Martínez, y San Pedro,
- Mantener las medidas para controlar las inundaciones de los arroyos, y
- Proporcionar mas oportunidades para que personas puedan gozar de estos arroyos urbanos.

Para mas información o para responder, por favor contacte a Linda Vela al (210) 785-0888 o por correo electrónico en vela@rjrivera.com.

Para mas información, visítenos en:
www.westsidecreeks.com.



Date: 08/27/2009

ESD Creek Book Project

Submitted By: Katherine Peche, Technical Services **Division:** Technical Services

Department: Environmental Sciences

Information

CAPTION

**PRESENTATION AND DISCUSSION ON THE SAN ANTONIO RIVER
AUTHORITY CREEK BOOK PROJECT**

Presenter

Katie Peche

Estimated Presentation Time: 15 minutes

In an effort to reduce nonpoint source pollution in the San Antonio River Basin, the San Antonio River Authority is in the process of developing a manual for landowners and residents that will educate them on the creeks within the basin and best management practices in our watershed. Currently the book is in the design phase, and the draft containing only content is being reviewed by external agencies. The purpose of the agenda item is to present the project to the Committee members and provide a copy of the draft for their review.

Discussion

Attachments

Link: [CreekBkDraft](#)

Link: [GlossaryAppendix](#)

Introduction

Texas is home to numerous beneficial and useful water courses. These water courses are referred to as rivers, sloughs, brooks, branches, bayous and headers. In central and south Texas they are most commonly called creeks.

Creeks are a vital resource, both for you and the animal and plant species that depend on them. Creeks provide essential habitat for aquatic and terrestrial life, so it is important for property owners and communities to maintain the health of their creeks. If mistreated, creeks can easily become **impaired** with poor **water quality** and little to no animal or plant life. Natural habitats are sensitive, and human activity can have detrimental effects on the ecosystem. In addition to habitat for animal and plant species, healthy creeks provide water supply, **groundwater** recharge, a channel for flood waters and a priceless amenity that everyone can enjoy.

This book will serve as a guide to help you learn what a creek needs to be healthy and how you can help to maintain that healthy quality. You will learn how to help prevent erosion and flood loss, improve water quality, prevent pollution from entering creeks and groundwater, use alternative products that are safer for the environment, minimize waste and conserve our natural resources. Be sure to share this information with others so they too can help maintain a healthy system of creeks and streams. Residents who do not live near a creek can also use this book, as all the creeks within the San Antonio River Basin are connected through **watersheds**. Refer to this guide whenever you need assistance in caring for your creek or need suggestions for ecologically sustainable practices. If you and others in your community ensure the health of your creeks, everyone will benefit.

Chapter 1 Watershed Basics

<insert Major River Basins of Texas map>

The lines on this Texas map aren't roadways. They aren't rivers either, but they tell us a great deal about how the land drains the state of Texas—and, by extension, how **runoff** carrying pollutants and contaminants ends up in our rivers, creeks, and streams.

Everyone on planet Earth lives in a watershed, also known as a **basin**. A watershed is an area of land that drains to a single point, usually a river, creek or stream. The map above illustrates the major river basins of Texas. The white lines are the boundaries that separate the watersheds, called **watershed divides**.

Generally, Texas river basins drain from northwest to southeast and into the Gulf of Mexico. Texas has 23 major basins, and the San Antonio River Basin is one of them. The San Antonio River Basin is a 4,180 square mile land area that drains into the San Antonio River, then into the Guadalupe River, and, 11 miles downstream, into San Antonio Bay. The San Antonio River Basin and the 240-mile-long San Antonio River carry **surface water** from 2,500-foot elevations within the Texas Hill Country of Bandera and Kerr counties to the less than 100-foot elevations in Refugio County.

<Insert map of SAR Basin>

Just as Texas is divided into numerous basins, the San Antonio River Basin contains numerous watersheds, each made up of smaller **subwatersheds** and even smaller **catchment** areas. In your own neighborhood, hills and valleys play their role in channeling water out of your subwatershed and into the next one downstream.

Storm Water Pollution

Prior to human settlement and development in the San Antonio River Basin, rainfall was absorbed into the soil, carried into aquifers, consumed by wildlife or evaporated as it flowed from higher elevations to lower elevations across the land until it reached the San Antonio River. Along the way, native grasses, trees, root systems, and other features of the natural environment would slow down the flow and filter out many of the sediments, bacteria, and other natural contaminants picked up on the surface and carried by water into the basin's creeks.

Today, water travels differently through the San Antonio River Basin. Urbanized areas of the basin now contain **impervious cover** such as rooftops, driveways, parking lots, roads, highways and interstates. Rural areas are farmed, ranched, or otherwise overworked and fertile top soils have washed or blown away. Storm drains and other drainage systems carry water directly to our streams.

Groundcover in these areas carries more rainwater—and carries it faster—than natural, undisturbed groundcover. As more natural surfaces are paved and developed, less water **percolates** into the ground and more water instead goes over streets and into storm drains, picking up pollutants and carrying them to creeks. Water that goes into storm drains is not treated before it reaches **water bodies**. This is known as **storm water runoff** or **non-point source pollution**. The faster the water moves across a surface, the more pollutants it can transport into our waterways. Runoff is the most significant contributor to water quality degradation in the San Antonio River Basin. It is also the most difficult to regulate, because runoff pollution is potentially caused by every one of the over 2 million people who live in the basin.

The biggest non-point source pollution concern in the San Antonio River Basin is the presence of **E. coli** bacteria. Numerous creeks are not meeting the **contact recreation** criteria set by the state. San Antonio River Authority (SARA) scientists have seen a correlation between recent storm water events and elevated bacteria levels in the river. SARA's River Recreation Website (www.riverrec.org/geomean.php) illustrates this by showing weekly bacteria levels at four sites on the San Antonio River and identifying samples collected up to four days after a rainfall event.

The most effective way to prevent storm water pollution is to keep excessive pollutants from accumulating on surfaces where they may be picked up by storm water runoff. Pollutants left on impervious cover are particularly vulnerable to being transported by storm water.

We are all water stewards, and as such, it is our duty to learn about our creeks so that we can properly maintain them. The next chapter will teach you common characteristics of creeks in the San Antonio River Basin and how to tell if your creek is healthy or impaired.

Chapter 2 Keeping Your Creek Healthy

All creeks in the San Antonio River Basin have been altered by human development in some way. However, some creeks within our community are still healthy and support a diverse wildlife population. All creeks—whether they have been altered or not—need to be protected and treasured. With help from our community, even the most impaired creeks can be restored to a healthy state.

Creeks are characterized as being **intermittent** or **perennial**. Intermittent creeks, which are sometimes dry, are just as important as perennial creeks because they can recharge ground water and pass on storm water to perennial creeks. Below are some typical signs of healthy creeks and impaired creeks in the San Antonio River Basin. These signs can help you assess the health of your creeks.

Typical signs of a healthy creek

- Clear, cool water with no signs of **contaminants** and no **excess algae**
- **Stream flow** cycles that vary
- Stable banks with vegetation and minimal **erosion**
- Slow pools and fast water running over rocky, shallow areas
- Abundant rock and gravel substrate (critical for fish spawning and feeding)
- Canopy of **native riparian** trees, which helps stabilize banks, provides habitat for birds and mammals, provides a food source, and keeps water temperature cool for aquatic ecosystems
- Abundant native riparian vegetation, which provides roots that stabilize banks and shelter for wildlife and aquatic organisms
- Presence of a diverse **aquatic plant community**
- Fallen logs, branches, twigs, leaves and other natural debris which provide cover and hiding places for fish and other invertebrates—this natural debris helps support the aquatic food chain.
- High animal and plant diversity along streams
- Thriving aquatic animal populations, including fish, amphibians and insects

Typical signs of an impaired creek

- Poor water quality, which includes excess algae, **suspended sediments**, contamination from sewage scum or animal waste
- Elevated water temperature
- Stagnant water
- Unpleasant odors
- Foam or floating sheens (oils) on water surface
- Reduced water flow below what is normal for the creek

- Excessive erosion along banks, deeply incised stream bed, or high rates of sedimentation obstructing stream flow
- **Channelization**
- Dumped trash, litter, yard clippings, or other unnatural debris
- Desolate creek banks with a lack of vegetation and tree canopy
- Large percentage of invasive species that compete with native species within the habitat
- Limited diversity in animal and plant species
- Decreased or nonexistent population of fish, amphibians and insects
- A stressed fish community (fish swimming at water surface)

Everyone living within the San Antonio River Basin has a direct or indirect impact on creeks. Your actions can help reduce and prevent pollution, and you can encourage your neighbors to do the same. The following chapter contains tips for minimizing the amount of pollution that accumulates in creeks.

Chapter 3: Dos and Don'ts for Urban and Rural Landowners/Residents

Some of our everyday activities can seem harmless to the environment. However, our behaviors actually have a significant impact on our creeks and ecosystems. Developing good habits can help prevent pollution and keep our creeks and environment healthy. Here are some Dos and Don'ts for both urban and rural home and business owners.

Dos and Don'ts for Urban and Rural Landowners/Residents			
	<i>Don't</i>	<i>Do</i>	<i>Why?</i>
Grass Clippings/Leaves	Dump or blow grass clippings and leaves into creeks, creek banks, storm drains or streets, and don't put them in the garbage.	Add them to a compost pile, or leave them on your yard so they can fertilize your lawn.	Grass clippings and leaves provide nutrients to your lawn. Clippings that are carried or dumped into creeks can lead to less dissolved oxygen .
Grass Clippings/Leaves	<i>Don't...</i> Dump or blow grass clippings and leaves into creeks, creek banks, storm drains or streets, and don't put them in the garbage. <i>Do...</i> Add them to a compost pile, leave them on your yard so they can fertilize your lawn, or use a curbside yard waste collection service if it is available.		Grass clippings and leaves provide nutrients to your lawn. Clippings that are carried or dumped into creeks can lead to less dissolved oxygen .
Washing Your Car	Wash your vehicle in your driveway.	Take your vehicle to a carwash where special drains are installed to dispose of runoff.	The runoff from your driveway carries pollutants into storm drains, which can cause many problems with water quality.

Comment [k1]: This may be a better approach for the format. GRAPHIC DESIGNER WILL MODIFY FORMAT.

Trash/Litter	Put any trash in creeks or outside a recycling or garbage bin where wind or rain can carry it to storm drains or creek channels.	Place items that can be recycled into a recycling bin, and then make sure all other items go into a garbage bin with a lid.	Trash that is not disposed of properly can end up in creeks, obstructing flow and harming wildlife. <i>See Chapter 8 for recycling tips.</i>
Lawn Care	Fertilize or apply herbicides/pesticides to your lawn right before a rain event.	Try to avoid applying lawn treatments on days when a rain event has been predicted.	Fertilizer or chemicals applied just before a rain event will be washed away, bringing unnecessary nutrients and possibly toxic chemicals to aquatic life in creeks. <i>For tips on lawn care and watering, see Chapter 9.</i>
Automotive Products (Motor oil, antifreeze, etc.)	Hose down or dump motor oil, brake fluid, antifreeze, battery acid or any other chemicals into streets or creeks.	Dispose of automotive waste by placing it in clean, leak-proof containers. Transport waste to the nearest recycling collection site. Also, keep up with your vehicle maintenance to prevent any fluid leaks. Use a drip pan to catch any fluids when working on your vehicle.	If not disposed of properly, automotive waste can contaminate creeks and groundwater. Oils and other chemicals can harm fish and other wildlife. <i>For more information on hazardous waste, see Chapter 4.</i>
Household Products/Cleaners (Paints/Other solvents)	Dump paint, turpentine or any other household solvents on the ground or in storm drains. Don't clean brushes or paint buckets near a creek or by a storm drain.	Use as much of the product as you can before recycling or disposing, and use water-based paints whenever possible. Dispose of solvents and containers properly at a hazardous waste facility. Wash	Paints and other solvents are extremely toxic and can impair a creek, contaminate surface and ground water and pose a health threat to communities. <i>For more information on hazardous waste, see Chapter 4.</i>

		water-based paint from brushes in the sink. For oil-based paint, wash paintbrushes in a container with a thinner, then take the thinner to a hazardous waste facility.	
Household Products (Batteries, Electronics, Metal hangers, etc.)	Let recyclable household products end up in creeks or in landfills.	Check to see if the product can be recycled, then take it to a recycling center. Some companies will take recyclables by mail.	Many household products contain hazardous materials that can be toxic to aquatic life if they end up in creeks. <i>Refer to Chapter 4 for more information on these products, and Chapter 8 for recycling tips.</i>
Grease/Used Cooking Oil	Pour grease or used cooking oil down your drain or into creeks.	Find the nearest hazardous waste recycling facility where you can take used grease. <i>Refer to chapter 4.</i> If you can not recycle used grease, put it in a sealed, disposable container and discard in the garbage.	Grease or oil can build up in sewers, causing back-ups and overflow, which can drain into creeks. Grease or oil can cause serious damage to a creek and its wildlife.
Animal Waste/Other Debris	Leave animal or pet waste in your yard or on the ground where you walk your pet.	Make sure you clean up after your pet. Carry waste bags on walks. Ideally, biodegradable bags are the best choice. <i>See chapter 9 for more information.</i>	Animal/pet feces that are not picked up can end up in storm drains and creeks. Feces can carry bacteria that cause disease. Pick up your pet's waste to reduce these risks to the environment and public health.
Rain Gutters	Direct water from your rain gutters or other pipes directly into storm drains or	Divert the water to a grassy area or rain garden . You might also consider	Diverting rain water allows grass to filter the water before it leaves your property.

	creeks.	capturing rain water for use on your lawn.	You can use captured rain water for watering plants.
Pools/Spas	Drain your pool or spa into a creek or storm drain.	Make sure pool water ends up in a sewer access point (this is usually a 3-4 inch plastic pipe on your property with a screw cap on it which leads directly into the sewer), or drain water onto an open grassy area to allow the chlorine to dissipate. Contact a local pool service company for assistance.	Chlorine and other chemicals can harm creeks and wildlife, so make sure they are kept away from creeks or storm drains.
Constructing Pathways	Create impervious cover that prevents water from entering the ground.	Use pervious cover, such as pervious concrete, bricks or rocks for roads, sidewalks or driveways. Use berms or silt fences to prevent erosion when you disturb vegetation.	Reducing impervious cover allows water to soak into the soil, reducing storm water runoff, soil erosion and the amount of pollution in creeks.
*Livestock	Allow livestock access to creek bank areas that have been severely affected by uncontrolled grazing.	Fence out livestock from creek beds and creek banks to provide for recovery of water quality and habitat. Create catchments and treat collected waste to prevent fecal matter from contaminating waterways.	Fencing off stream banks allows for re-growth of vegetation and can help stop pollutants in manure from entering the stream.

*On-Farm Disposal of Dead Animals	Dispose of dead farm animals in a creek or in the 100 year floodplain .	Bury the animal at least 300 feet from the nearest drinking water well, creek, pond, lake or river, and at least 200 feet from adjacent property lines.	Disposal of dead animals should always be done in a manner that protects public health and safety, does not create a nuisance, prevents the spread of disease and prevents adverse effects on water quality.
*Septic Systems	Install a septic system near a drinking water line, creek, or in the floodplain.	Have your septic system installed outside of the floodplain and away from a creek. Have your septic system installed by a licensed installer. Report sewer overflows or leaks to your local authorities.	Most septic systems use surrounding soils to remove phosphorus; certain soil conditions, combined with close proximity to surface water, can result in contamination of creeks.
*Stream/Floodplain Alterations	Alter the floodplain or the channel of a creek bed without appropriate state and local permits.	Acquire all appropriate permits and consider impacts to water quality and aquatic habitat of a creek.	Obtaining the proper permits ensures that the property owner has legal permission from regulatory agencies to alter creek beds or floodplains.

*Typically applies to Rural landowners/Residents

Chapter 4 Hazardous Waste

Hazardous waste, if not disposed of properly, can harm a creek and pose serious health threats to our communities and the environment. Learning about these wastes can help us understand why they are harmful and how they can be disposed of properly. Some can be recycled, but others need to be taken to a special facility for proper disposal. Applying this knowledge to our everyday practices can help prevent pollution and keep our creeks clean.

Livestock/Pets

Livestock manure, if used wisely, can be a valuable fertilizer. However, if it enters a creek, it can cause many problems for water quality, aquatic life and other wildlife that depend on the creek. Nutrients from animal waste can cause algae blooms, which decrease levels of dissolved oxygen in the water. Animal waste also produces ammonia

and methane, gases poisonous to aquatic life, and carries bacteria, which can contaminate the creek and the water downstream.

The best practice for managing livestock is to keep paddocks, stalls and feedlots away from creeks, ditches and storm drains. A wide riparian buffer between livestock and the creek will keep waste products from entering the creek. Livestock can also trample creek banks, destroying the vegetation that helps stabilize them, so avoid allowing livestock to create trails along the banks.

Though most pet owners wouldn't think so, even small amounts of waste from smaller pets such as dogs can affect water quality in creeks. The best thing to do to prevent this is to pick up your pet's waste and dispose of it properly.

Illegal Dumping/Trash

Unfortunately, some people think creeks are dumps for used appliances, furniture, shopping carts, mattresses and other trash. Trash will negatively affect water quality, aquatic habitat and wildlife that depend on the creek. Even if a creek is dry most of the time, trash should never be dumped in it because flood waters after rain events will carry the trash downstream, polluting a wider area and increasing the risk of flooding. Dispose of trash properly to prevent contamination of creeks. Recycle any materials that you can, then make sure everything else goes into a proper garbage container. *Refer to Chapter 8 for recycling tips and suggestions.*

If you see illegally dumped trash, or witness illegal dumping, please report it to your local authorities. Not only is illegal dumping harmful to creeks and wildlife, but it can also contaminate aquifers and groundwater, and pose a health threat to the community. Illegal dumpers can face stiff fines and are responsible for clean-up. For the San Antonio area, dial 311 to report an incident. For other cities and counties, contact information is listed in the references section. You can also contact the Texas Commission on Environmental Quality (TCEQ): 1-800-832-8224 (24 hrs.) or 1-888-777-3186.

Automotive Waste

Automotive care, whether at an auto body shop or at home, generates several kinds of potentially hazardous waste, including solvents and coatings; contaminated rags, wipes and absorbents; empty containers; used oil and antifreeze; sanding or grinding dusts; and contaminated wash water.

If these wastes are not stored or disposed of properly, they can end up in creeks and other water bodies. Never store these wastes in a floodplain, creek bed or on creek banks. It is also important not to store or leave these materials in an area where they can leak into a storm drain or ditch. Be sure to report any spills or leaks to your local government (*Check out the References Section for contact numbers*). Proper disposal of these materials is essential for protecting water bodies and public health. Many of these wastes can be recycled, including motor oil, car batteries and antifreeze. *Refer to chapter 8 for a list of additional recyclable materials and where you can take them, or call 1-800-*

CLEAN-UP. Visit www.tceq.state.tx.us/assistance/sblga/arshop.html for compliance resources.

Household Waste

Some consumer products contain chemicals that can present safety concerns if improperly used or disposed of; these materials are often called hazardous household wastes (HHWs). These wastes are considered municipal solid waste, and almost all can be safely and legally disposed of through your local collection programs. Additionally, like automotive materials, these household products need to be stored properly (out of floodplains, away from creek beds and banks). Any spills or leaks should be reported to your local government. Here are some examples of HHWs:

- Fluorescent light bulbs (including compact fluorescent light bulbs)
- Oil-based paints
- Some anti-mildew and exterior latex paints
- Some wood stains
- Fuels (gasoline, propane, diesel)
- Corrosive cleaners (such as lye-based oven cleaners)
- Drain cleaners
- Pool chlorine and acid
- Automotive batteries
- Nickel-cadmium batteries
- Televisions and computer monitors
- Some pesticides

If thrown in the trash, HHWs could potentially harm solid waste collectors. Most of these materials are recyclable. Therefore, disposal in the regular garbage is not appropriate. The City of San Antonio maintains a permanent HHW Drop-Off Center (DOC). This center provides an environmentally safe means for citizens to dispose of items such as paint, pesticides, oil, anti-freeze, batteries and household cleaners. Pouring oil and other HHWs onto the ground is also an inappropriate disposal method. This pollution can affect streams, lakes, wildlife and even drinking water. Please dispose of your HHWs properly by bringing them to the HHW DOC. *If you are outside the San Antonio area, check out the references section to find out where to take hazardous materials. You can also call 1-800-CLEAN-UP to find the nearest hazardous waste collection facility in your area.*

Chapter 5: Septic Systems/Wastewater Treatment Plants

Wastewater treatment is very important in keeping our State's most important resource safe and suitable for our use. Whether in lakes, rivers, bays and estuaries, wetlands or groundwater, clean water is needed to provide for human consumption and recreation, maintain aquatic wildlife habitats, supply bays with fresh water and recharge groundwater.

Septic Systems

Homes and businesses in several rural communities in the San Antonio River Basin use septic systems to dispose of wastewater. When septic systems are properly designed, constructed, installed and maintained, they effectively reduce or eliminate most human health or environmental threats posed by pollutants in household wastewater. Each county retains a designated representative licensed by TCEQ that will inspect the installation of septic systems. The type of soils present in your county will determine the type of septic system you need. Septic systems need regular maintenance to ensure they do not fail. Inadequate treatment of sewage by septic systems can cause groundwater contamination. Human health problems caused by these contaminants include eye and ear infections, gastrointestinal illnesses and diseases like hepatitis.

Septic Systems should be inspected at least every 3 years by a TCEQ approved septic system professional. Tanks should also be pumped at least every 3 to 5 years. Inspectors should measure the **scum** and **sludge** layers in the tank. Generally, if the scum layer is within 6 inches of the tank bottom or the sludge layer is within 12 inches of the tank outlet, the tank needs to be pumped. The **drainfield** tied to your septic system also requires care. Avoid planting trees and shrubs directly over or near your septic system. Roots from trees and shrubs can clog or damage your drainfield. Never drive or park vehicles on any part of your system. This will compact the soil and damage your system. Keep gray water drains and rainwater drainage systems away from your drainfield, as additional drainage can cause flooding of the drainfield and plumbing fixture back-ups. If your washing machine is tied into your septic system, washing load after load can flood your drainfield. Allow time between loads for your septic system to recover.

In order to maintain an effective system, monitor the products you put down your drains. Never flush dental floss, feminine hygiene products, condoms, diapers, cotton swabs, cigarette butts, coffee grounds, cat litter, paper towels or any other kitchen and bathroom items that can clog the system. You should also avoid flushing household chemicals and cleaners (unless labeled as “septic safe”), gasoline, oil, pesticides, antifreeze and paint because these chemicals destroy the beneficial bacteria that live in your septic system. Fats, oils and grease should always be thrown in the trash because they can cause the scum layer to grow too quickly in your septic system. Limit the use of your garbage disposal to lessen the amount of grease and solids entering the septic tank. If you must use a garbage disposal, you should have grease traps installed, since grease and oils will cause your septic system to fail. Be on the lookout for household cleaners, detergents, toilet paper and other products that are now labeled “septic safe.”

Septic systems should never be installed in or near the floodplain. TCEQ will not approve plans for installing a septic system in the floodplain unless plans demonstrate that the system will not be damaged or release contaminants during flooding.

TCEQ (www.tceq.gov) can provide contact information for licensed companies and individuals who can install and inspect septic systems in each county. If you're interested in inspecting your own septic system, contact TCEQ for information on courses and licenses.

Wastewater Treatment Plants

Some of the benefits of treating wastewater at a central plant are: it helps to prevent water pollution, protects human and animal health and helps prevent dissolved oxygen depletion in water. Treated effluent meeting TCEQ standards can also be discharged into nearby streams, creeks, and rivers to add to the **instream flows**. Wastewater Treatment Plants are more efficient than septic systems in treating large volumes of wastewater. They are also more efficient to operate and maintain than septic systems.

We as a community can help the wastewater treatment plant operate at a high standard by just taking a few simple steps like taking oil and grease to a recycling center or throwing it away in the garbage instead of pouring it down the sink, never flushing any pharmaceutical drugs down the sink or toilet and never disposing of commercial household products and cleaners down the sink or toilet.

There are many inexpensive, easy-to-use natural alternatives which can be used in place of commercial household products. Here is a list of common, environmentally safe products which can be used alone or in combination for a wealth of household applications.

- **Baking Soda**-cleans, deodorizes, softens water, scours.
- **Soap**-unscented soap in liquid form, flakes, powders or bars is biodegradable and will clean just about anything. Avoid using soap which contains petroleum distillates. Antibacterial products have chemicals that may not break down naturally and could reside for long periods of time in the environment. In order for the antibacterial ingredients to work, they need to be left on a surface for about two minutes, which is longer than most people take to wash their hands. Some scientists believe that bacteria can develop a resistance to these ingredients over time, and that other natural bacteria that are beneficial to us can be destroyed when using these products. The CDC (Center for Disease Control and Prevention) says that antibacterial soap is not necessary, but washing your hands with warm water and regular soap is one of the most effective ways of preventing infection.
- **Dishwasher Soap**-Mix equal parts of borax and baking soda.
- **Lemon**-one of the strongest food acids, effective against most household bacteria.
- **White Vinegar**-cuts grease, removes mildew, odors, some stains and wax build-up.
- **Toilet Bowl Cleaner**-Mix ¼ cup baking soda and 1 cup vinegar, pour into basin and let it set for a few minutes. Scrub with brush and rinse. A mixture of borax (2parts) and lemon juice (one part) will also work.

A list of environmentally friendly products can also be found in Chapter 9.

[Chapter 6: Preventing Erosion/Protecting Flow](#)

Preventing Erosion

The next time you are home during a rain shower, head outdoors with your boots and umbrella and watch where the rainwater goes. Does water soak into the ground quickly, or does it collect in puddles and flow off lawns and driveways? Is your rooftop connected to a gutter system that is adjacent to a sidewalk or driveway that drains into a concrete-lined ditch? Do you see a storm water superhighway? Soil type affects how water infiltrates, or soaks into the ground. As you might expect, water quickly infiltrates sandy soil, but has a hard time seeping into fine-grained clay soils.

During your walk, note how far it is to the nearest storm sewer, ditch, wetland, stream or body of open water. Note whether runoff flows onto your land from adjacent streets, lawns or storm water systems. If you live at or near the bottom of a hill, you may have problems unique to your relatively low-lying position. Be sure to go out during more than one rain shower to get a good understanding of runoff flows during small and large storms.

Homeowners can use landscaping and site management to control runoff and protect the creeks in their subwatersheds. Land-disturbing activities, uncovered soil surfaces, and the absence of water-retaining structures may allow runoff to deposit soil in creeks, streams, lakes, marshes, estuaries and, ultimately, the ocean. Excess soil and the contaminants it carries can reduce water quality, so it is important that you try to keep your soil on your property.

Large-scale loss from erosion results in at least two major environmental problems:

- Cropland becomes less productive because the soil that remains after large-scale erosion loses its fertility and is unable to supply plants with necessary nutrients. The soil's ability to retain water is also greatly diminished. These changes, in turn, result in higher production costs, including costs for additional fertilizer.
- The eroded soil becomes sedimentation in waterways which threatens aquatic life and hinders water flow. Eroded soil also carries polluting agricultural chemicals into rivers, streams, lakes and reservoirs.

Suggested Ways to Prevent Erosion and Conserve Soil	
In Urban Areas	
Plant trees and shrubs, especially along slopes.	Trees and shrubs can reduce runoff by up to 50%
Keep to established pathways.	Established pathways have been planned and properly located to minimize erosion. Venturing off of these pathways creates trails of compacted soil and kills vegetation which would normally retain soil particles
Minimize impervious surfaces.	Choose materials which allow for water infiltration. Flagstone and wood are good alternatives to concrete and asphalt.
Use mulch material to cover bare soil.	Mulch helps protect bare soil from erosion.

Comment [I2]: GRAPHIC DESIGNER WILL COMBINE THESE COLUMNS.

Use ground cover plants in areas where grass will not grow.	Ground cover plants create a root system which protects soil from erosion.
Plant vegetation on steep slopes.	Contact local nursery suppliers for plants that grow well on steep slopes and which have root systems that help retain soil. <i>See Chapter 7 for examples of native plants.</i>
Avoid damaging or removing vegetation along creeks.	Less vegetation means less protection from erosion.
Install rain gardens or rain collection barrels.	Rain gardens and rain collection barrels collect storm water runoff, reducing the amount of storm water in creeks.
In Rural Areas	
Install gutters on roofs, with downspout outlets on grassed, level, non-erosive areas, rain gardens or rain barrels. Locate water outlets to avoid runoff to bare soil, or steep slopes.	Gutters collect roof runoff allowing homeowners to more easily control the path runoff water takes as it leaves the property. Gutters also prevent erosion from taking place along the roof line around the perimeter of the house.
Keep animals away from slopes during wet weather.	Large animals can trample beneficial plants and dislodge soil, causing increased erosion during rain events
Contour tillage	On slopes, align tillage and planting operations on the contour. This will slow runoff, increase infiltration and reduce erosion.
Plant dense low growing vegetation in ditches, swales or other waterways or install an inlet structure with pipeline to carry water safely around erosive area. Thick groundcover will hold the soil, slow runoff and increase infiltration.	
Include annual rye in the fall seed mix as good winter “nurse” crops to start growing fast and protect soil.	
Leave abundant plant debris on soil surface.	Leaves and stems on soil slow runoff, trap soil particles, increase infiltration and improve soil structure.

Protecting Flow

Owners of property which contains creeks, open channels or drainage ditches are faced with many often unexpected challenges and responsibilities. Some of these challenges are increased maintenance, bank erosion and pollution prevention. These property owners face at least two major tasks:

- Maintain the **stream buffer** of deep-rooted, native vegetation along the creek

- Remove excessive **vegetative litter** or debris before it affects downstream communities.

Taking these actions lessens the adverse impact of polluted runoff on downstream neighbors.

Activities that can NEGATIVELY impact stream flow
Dumping of man-made debris, yard debris, concrete or rocks on creek banks and in creeks
Disturbing land within the stream buffer
Draining roof or lawn runoff directly into streams via piping
Removing native vegetation within the stream buffer
Storing materials in the stream buffer
Building structures in the stream channel
Altering the normal course of stream flow
Modifying stream banks to provide access to the stream channel
Installing patios, benches, etc. along the creek
Activities that can IMPROVE stream flow
Allow stream buffer area to grow naturally
Store materials in secure locations away from the stream
Install a rain garden and rain barrels to collect household rain water
Use mulching mower, letting clippings fall instead of bagging them
Compost yard debris away from stream bank
Mulch or plant over bare earth on your property
Remove excessive vegetative litter and fallen trees that obstruct stream flow
Enjoy the stream using passive recreation measures

Chapter 7: Plants and Wildlife

The San Antonio River Basin Riparian Corridor

A **riparian corridor** is the area that borders streams, rivers and other water courses, including the natural floodplain. The San Antonio River Basin riparian corridor exists along the San Antonio River, its seven major tributaries (Salado Creek, Leon Creek, Medio Creek, Medina River, San Pedro Creek, Cibolo Creek, and Marcellinas Creek) and numerous smaller tributaries including intermittent and perennial creeks. These areas can often be seen as corridors of trees weaving through the landscape of urban, suburban and rural land, including housing developments and agricultural fields (*note: insert aerial or birds-eye view photo showing this corridor weaving through the landscape*). Throughout its path, the riparian corridor of the San Antonio River Basin ranges from wide to narrow, and from very healthy to highly degraded. Riparian areas are some of the most productive **ecosystems** for wildlife **habitat**, and these areas are critical to the preservation of our native San Antonio River Basin flora and fauna.

Riparian Corridor Benefits

Everyone benefits from a healthy riparian corridor through a variety of ecosystem services provided by these areas. Healthy riparian corridors provide the following vital services:

- Water quality enhancements - filtering pollutants, trapping sediments, and slowing stormwater runoff;
- Erosion control - stabilization of the soil by plant roots, especially on banks;
- Wildlife habitat - terrestrial and aquatic species including intermittent visitors such as migratory songbirds and permanent dwellers such as raccoons;
- Input of organic matter - leaf litter and woody debris (large and small) which supports aquatic organisms; and
- Shading - naturally regulates water temperatures and can help to minimize temperature extremes that could negatively affect aquatic organisms such as fish.

Wider riparian corridors are more connected to other natural areas and are better able to provide the important ecological functions and benefits described above. Humans can positively affect the health of riparian corridors by providing careful stewardship of these areas and implementing best management practices on their land such as maintaining a natural stream buffer along water courses. Alternately, humans can negatively affect the health of riparian corridors directly, through destruction and overdevelopment, and indirectly, through incompatible activities within or adjacent to these areas.

Riparian Corridor Plants

Plants in the riparian corridor are greatly influenced by water, whether it is moving slowly through the soil or moving quickly in a watercourse following a rain event. Plant species found in the riparian corridor must withstand great fluctuations in the amount of water available to them throughout the year, including periodic flooding. A diversity of native plants is needed in the riparian corridor to provide quality habitat and long-term stability of the ecosystem. A mix of native trees, shrubs, vines, grasses, **sedges** and wildflowers is ideal for maximum wildlife habitat value in the riparian corridor. Individual plants provide different habitat functions throughout the year, such as nectar production in the spring for butterflies and seed production in the fall for birds, which benefit a variety of wildlife.

Many riparian areas, particularly those in urban and suburban environments, are overtaken by **non-native** and **invasive** plant species, which can result in a decrease in **biodiversity** and a loss of native plant species and the wildlife they support. In fact, invasion by non-native species is considered the second greatest threat to biodiversity next to habitat destruction. Some non-native plants are so aggressive that they kill off all other vegetation and become the only plant present in certain areas. On the other hand, some non-native plants are not invasive, and some native plants can exhibit invasive characteristics. However, it is important to remember that each non-native plant in a given area removes habitat functions that native plants could provide.

You can help provide important ecosystem functions and benefits by planting native plants on your property, whether it includes a riparian corridor or not. Even if you only

contribute a few native plants to the ecosystem, you're still providing native habitat. No amount of native habitat is too small to provide benefit. The more connected native plants are to each other and to adjacent native plant communities, the better these areas are at providing habitat for a greater amount and diversity of wildlife. **Table "Plants 1"** lists native plants commonly found in the San Antonio River riparian corridor, and **Appendix "Plants 1"** includes more detailed information about these plants. **Appendix "Plants 2"** includes information regarding native plant alternatives for non-native invasive plants commonly found in residential landscapes and the San Antonio River riparian corridor.

Table "Plants 1". Native Plants commonly found in the San Antonio River Riparian Corridor (see Appendix "Plants 1" for more details on these plants)

Trees	Shrubs & Vines	Wildflowers (Forbs)	Grasses, Sedges, & Rushes
Black willow	Baccharis	Arrowhead	Bushy bluestem
Cedar elm	Bluewood condalia, Brazil	Bush sunflower	Eastern gamagrass
Hackberry	Buttonbush	Frogfruit	Inland sea oats
Pecan	Mustang grape	Pickernelweed	Switchgrass
Sycamore	Roughleaf dogwood	Water primrose	Wild rye

Note: insert photos of these plants – suggested photos are included at: I:\photos_esd\ESDCreekBook\plants_creek_book_Wasowski_photos

All images should bear the following credit: "Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center" - for more information see <http://www.wildflower.org/>

Riparian Corridor Wildlife

The riparian corridor of the San Antonio River Basin provides shelter and food for a variety of wildlife. This corridor allows movement of wildlife between the upper and lower watersheds. Connectivity of the riparian corridors allows wildlife to establish territories and migrate from one habitat to another for shelter, feeding and breeding purposes. The health of the creek and adjacent riparian habitat are directly related to one another; if one or the other is negatively impacted, both will be affected. A wide variety of healthy habitats increases biodiversity in an area, so protection of these riparian habitats is essential. Common mammals that may be seen include the Common raccoon, Eastern Fox squirrels, Virginia opossums, White-tail deer, Nine-banded armadillos, Eastern Cottontail rabbits and feral hogs. Common reptiles include Diamondback water snakes, Texas rat snakes, Red-eared Sliders, Guadalupe Spiny Softshell turtles and Six-lined Racerunners.

The San Antonio River Basin riparian corridor is extremely important for many birds because it is located within the Central Flyway, a primary bird migration route generally located in the U.S. Great Plains and Canada. Various bird species travel thousands of miles within this flyway while migrating between the Arctic Ocean and Patagonia—the southern region of South America. A healthy, diverse riparian corridor sustains these migratory birds as they pass through, providing water, food and protective cover. Common migratory birds that may be seen include the Belted Kingfisher, Great Blue

Heron, Night Heron, Cormorant, White-winged Dove and Turkey Vulture. Uncommon migratory birds that might be seen include the Bald Eagle, Snow Goose and Golden-cheeked Warbler.

The diversity of fish found in a water course can be an indicator of the water quality and conditions. Fish can be very sensitive to changing conditions in a creek, including sediment and nutrient levels in the water and temperature changes. Some fish have a low tolerance of disturbance, while others have a high tolerance. Over eighty different species of fish are found in the San Antonio River Basin, which is a result of an overall healthy riparian corridor capable of supporting such a diverse fish community. This fish community includes Red Shiner, Largemouth Bass, Logperch, Longear Sunfish, Bluegill Sunfish, Channel Catfish, Western Mosquitofish and Spotted Gar.

Comment [k3]: add pictures of common fish, birds and mammals.

When visiting a creek, be sure your recreational activities are creek-friendly. Supervise children and control pets so that wildlife is not disturbed or harmed. Pick up any trash and make sure it goes into proper containers. Respecting the creek and habitat is important for its preservation, and will make the visit for you and others more enjoyable.

Chapter 8: Recycling

Many materials can be recycled, including plastic bottles, aluminum cans, steel from food cans and paper. Unfortunately, these recyclable materials often end up in our creeks, creating flow obstructions and harming wildlife. The benefit of recycling is two-fold: these materials can reduce the amount of raw materials used to create new products, and we can keep them out of our waterways.

Material	Why Recycle?
Glass*	Glass containers are 100 percent recyclable. Glass can be melted and reformed to create new shapes and containers.
Batteries	If put in a landfill or incinerator, car batteries, single use batteries and rechargeable batteries can disperse heavy metals or toxins, so it is important to recycle all kinds of batteries.
Plastic*	Plastic makes up many products including drinking containers, grocery bags, pipes and countless others. Plastic is usually made of petroleum, a non-renewable resource. Almost all types of plastic can be recycled. Plastics that have number 1, 2, 3, 4, 5, 6 or 7 on the container can be recycled. Plastic grocery bags are not accepted by San Antonio’s curbside recycling program, but you can take them to HEB or Wal-mart.
Metal*	Metal is used in many products, including steel cans for food and aluminum soda cans. Metal can be melted and formed into different shapes to create new products.
Styrofoam	Styrofoam is a very common plastic. Products made out of this material include packaging peanuts, food containers and cups. While not all recycling facilities accept Styrofoam, it is recyclable.
Brush	Includes brush, leaves, and grass clippings. This yard material can

	be shredded into mulch that can be used in lawns and gardens or placed on a compost heap to become fertilizer.
Paper/Cardboard*	Paper and cardboard are both 100% recyclable. Paper recycling bins/dumpsters are widely available, so it is quite easy to recycle these materials.
Car Parts/Tires	It is illegal to dump automotive liquids such as antifreeze, oil or other fluids; they need to be recycled or disposed of properly. These materials can have negative effects on the environment and community if they are not recycled or disposed of properly. Many auto stores will accept old batteries, liquids or tires for recycling.
E-Waste	Computers, printers, televisions, cell phones and other electronics are known as E-waste. Computer manufacturers are required to offer free recycling of computer equipment to consumers in Texas. These materials should never be dumped in creeks because they contain heavy metals.
Clothing/Household goods	Local charities can accept used clothing or household items. By reusing these materials, we can keep them out of landfills and creeks.

*Accepted by SA Curbside Recycling

The City of San Antonio curbside recycling program accepts a wide variety of materials. To request a recycling bin or for additional information on the city's program or where to recycle other materials, please dial 311, or visit www.sanantonio.gov/swmd. If you do not live within the city limits, contact your local authorities to see if they have a recycling program. If they do not, you can ask if they can start a program; the more interest there is in recycling, the greater the chance of a recycling program being developed.

Even if the area where you live does not have a recycling program, you can use several resources to find out how to recycle your materials. www.Earth911.com is a great website for recycling tips, a list of recyclable materials and the nearest place you can take them. The TCEQ has a program called Take Care of Texas that gives tips on how to recycle and conserve found at www.takecareoftexas.org. They also have several publications that can provide more information about recycling. You can download these publications at www.tceq.state.tx.us, or call (512)239-0028 to order them.

Buying Organic and Recycled Materials

In addition to recycling the materials you use, purchasing recycled materials helps to support those companies or organizations that are conserving resources. Supporting businesses that use sustainable materials or practices helps lessen our impact on the environment and encourages more businesses to do the same.

[Chapter 9: Natural Alternatives/Tips](#)

Alternative Products

Many alternative products are available that are more environmentally friendly than your average consumer product. These products are usually made from recycled materials, require less energy or non-renewable materials to make, use sustainable materials and/or biodegrade more easily. The main goal of these products is to create less of an impact on the environment. Many products such as hybrid cars, disposable utensils made of biodegradable materials, or more energy-efficient light bulbs are available so both consumers and businesses can make less of an impact on our planet.

Some Eco-Friendly Products can be found here:

- www.seventhgeneration.com/
- www.gaiam.com/
- www.homedepot.com/ecoptions

Many sources of household hazardous waste can be replaced with other products that are less expensive and, although they take more time to create, are less of a threat to the environment.

Organic Cleaning Recipes:

Window Cleaner

8 parts Water

1 part Vinegar

Mix ingredients, scrub and wipe with newspaper

Abrasive Cleaner

Sprinkle baking soap or borax; add juice of ½ lemon and scrub

Silver polish

Make a paste out of baking soda and water, or use a small amount of toothpaste.

Drain Cleaner/Opener

¼ cup Vinegar

¼ cup baking Soda

Mix ingredients and pour mixture down drain. Let stand for a few minutes and rinse with boiling water.

Toilet Lime Deposit Removal

Pour full strength white vinegar in the bowl, let sit for several hours. Scrub with sturdy brush

Composting

Composting is a very useful practice that not only reduces the amount of trash in landfills, but also helps with lawn care. Organic materials such as food scraps (except meat or dairy products) and yard clippings are combined with bulking agents (such as wood chips, etc.) to create a fertilizer. Adding this to your lawn can reduce or eliminate the need for chemical treatment.

TCEQ has a very helpful publication about mulching and composting that is available online and by phone.

Order by phone:

TCEQ Publications

512-239-0028

www.tceq.state.tx.us/publications

Water Conservation Tips

- Taking quick showers saves a lot of water. You save 5-10 gallons for every minute you cut back. Installing low-flow shower heads also saves over 2 gallons a minute.
- Low-volume flush toilets also save water – while old toilets use 3.5 to 7 gallons per flush, new low-volume flush toilets use 1.6 gallons per flush.
- Watering your lawn before 10am and after 8pm is the most efficient way to water. Between those times, the water evaporates faster than the soil can absorb it, which wastes water and also wastes money. Check with your water provider on watering schedules during drought periods. Don't let water from any source run off directly into a creek, ditch or storm drain. If you see water from any source running off into a creek, ditch or storm drain, contact your local water provider right away.
- Don't let the water run while washing dishes.
- If you use a dishwasher, make sure it is full before you run a cycle.
- Purchase new, more efficient washing machines. They will lower the cost on your electric and water bills. Visit www.saws.org to learn about their programs and rebates, or visit www.energystar.gov to learn how to conserve and which products to purchase.

For more tips on conserving water, visit www.saws.org.

Making a Difference

Rivers and creeks provide us with the most important resource for all living organisms: water. Everyone and everything living in the San Antonio River Basin shares this resource, so it is essential that we each contribute to maintain its health. Taking care of our creeks helps improve and sustain habitats and wildlife populations, conserving the natural diversity and beauty of our basin. Make sure you are part of the solution for persevering and protecting our creeks for future generations.

Creek Book Glossary/Appendix/References

Resources

Regional Resources

San Antonio River Authority (SARA)

- Learn more information about the San Antonio River and its tributaries, as well as the ways SARA is helping preserve, manage and protect the water resources in the San Antonio River Basin.

www.sara-tx.org

The San Antonio River Improvements Project (SARIP)

- Learn about the different projects that are underway to improve the San Antonio River.

www.sanantonioriver.org

SARA's River Recreation Website

- Find out about San Antonio River recreation, stream flow rates and water quality

www.riverrec.org

City of San Antonio (COSA)

- General info

www.sanantonio.gov

- Household Hazardous Waste Program*

www.sanantonio.gov/swmd/emd/hhw.asp

210-207-6400

- Recycling*

www.sanantonio.gov/swmd/solidwaste/recycling.asp

- Illegal Dumping*

www.sanantonio.gov/swmd/solidwaste/ilegaldump.asp

*Dial 311 to report a problem or for more information

Counties/Other Cities

Bexar County

www.bexar.org

(210) 335-2011

Wilson County

www.co.wilson.tx.us/ips/cms

(830) 393-7303

Karnes County

www.co.karnes.tx.us/ips/cms

(830) 780-3732

Goliad County

www.co.goliad.tx.us/ips/cms/countyoffices

(361) 645-3337

Floresville

www.cityoffloresville.org

(830) 393-3105 (Public Works)

La Vernia

www.lavernia-tx.gov

(830) 779-4541 Ext 2

Karnes City

See information for Karnes County

Kenedy

www.kenedychamber.com

(830) 583-3223

Goliad

(361) 645-3454

See County website

State Agencies/Programs

Clean Rivers Program (CRP)

- This is a state fee-funded program for water quality monitoring, assessment and public outreach. It is administered by the TCEQ.

www.sara-tx.org/site/water_quality/water_qual_mon/clean_rivers.html

www.tceq.state.tx.us/compliance/monitoring/crp

Texas Commission on Environmental Quality (TCEQ)

- Responsible for setting policies to manage air quality, water quality and waste. Enforces environmental laws and regulations.

www.tceq.state.tx.us

Regional Offices:

- Region 13, San Antonio

Counties: Atascosa, Bandera, Bexar, Comal, Edwards, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Medina, Real, Uvalde, Wilson)

Main Line: 210-545-4329

- Region 14, Corpus Christi

Counties: Aransas, Bee, Calhoun, DeWitt, Goliad, Gonzales, Jackson, Jim Wells, Kleberg, Lavaca, Live Oak, Nueces, Refugio, San Patricio, Victoria

Main Line: 361-825-3100

Texas State Soil and Water Conservation Board (TSSWCB)

- The state agency that administers the soil and water conservation law and coordinates conservation and nonpoint source pollution abatement programs for the state.

www.tsswcb.state.tx.us

Texas Parks and Wildlife (TPWD)

- State agency that provides information about state parks, recreational activities and environmental concerns.

www.tpwd.state.tx.us

Texas AgriLife Extension

- Offers practical, how-to education to help improve stewardship of the environment and the state's natural resources.

<http://texasextension.tamu.edu>

Household Hazardous Waste (HHW) Information from TCEQ

- Learn about hazardous waste and how it should be recycled and/or disposed of properly.

www.tceq.state.tx.us/assistance/hhw/hhw.html

- Visit this link to find where the nearest hazardous waste collection facility is located:

www.tceq.state.tx.us/assistance/hhw/permanent_facilities.html

TCEQ – Spills

- Contact to report spills.

1-800-832-8224 (24 hrs) or 1-888-777-3186

www.tceq.state.tx.us/response/spills.html

TCEQ – Recycling

- Contact if you are unsure where to take items for recycling or proper disposal.

1-800-CLEAN-UP

www.cleanup.org

TPWD – Kills and Spills Team

- Contact to report a fish kill or spill.

512-353-3474 (24 hrs)

www.tpwd.state.tx.us/landwater/water/environconcerns/kills_and_spills/regions/index.phtml

Texas Parks and Wildlife Department Plant Information Database

- Contains extensive information about native and naturalized plants that have value for landscape restoration, especially erosion control and wildlife use.

<http://tpid.tpwd.state.tx.us>

Federal Agencies

Environmental Protection Agency (EPA)

- Environmental public record resource that has information about air, water, soil, environmental laws/regulations and other environmental issues.

www.epa.gov

United States Department of Agriculture Plants Database

- Provides standardized information about the vascular plants, mosses, liverworts, hornworts and lichens of the U.S. and its territories.
<http://plants.usda.gov/index.html>

United States Department of Agriculture Backyard Conservation Publication

- Single printed copies of this colorful 28-page booklet on Backyard Conservation and tip sheets are available free by calling 1-888-LANDCARE.
www.nrcs.usda.gov/feature/backyard/BkYrdHit.html

Other Resources

Keep Texas Beautiful

- An organization that coordinates many litter prevention and beautification activities and events statewide. Visit their website to look for different events and programs.
www.ktb.org

Recycling

- Find out which materials are recyclable and where recycling centers are located near you. Also find out facts about proper disposal or recycling information about numerous consumer products.
<http://earth911.com>

The Storm Water Manager's Resource Center

- Provides fact sheets on urban watershed management
www.stormwatercenter.net

Lady Bird Johnson Wildflower Center Native Plant Information Network

- Allows you to search for native plant information by plant traits or names, browse 23,000 native plant images, and pose plant questions.
www.wildflower.org

Take Care of Texas

- A statewide campaign initiated by the TCEQ that is designed to get all Texans involved in helping to improve water and air quality, conserve water and energy, reduce waste and save individuals money in the process.
www.takecareoftexas.org

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Glossary

Aquatic plant community – a group of plants that commonly grow together in a stream, river, lake, or pond.

Basin – another term for **watershed**.

Berm – earthen structure used to control erosion and sedimentation by reducing the rate of surface runoff. Berms either reduce the velocity of water, or direct water to areas that are not susceptible to erosion, thereby reducing the adverse effects of running water on exposed topsoil.

Biodiversity – Refers to the variety and variability among living organisms and the ecosystems in which they occur.

Buffer strip – an undisturbed area of vegetation near a water course that serves as a protective filter to the water course.

Catchment – any device or structure that captures water.

Channelization – the reconstruction of a natural waterway to make the water flow differently, usually resulting in the removal of natural bends in the stream.

Contact recreation – recreational activities involving a significant risk of ingestion of water, including wading by children, swimming, water skiing, diving, and surfing.

Contaminant – biological, chemical, physical or radiological substance which, in sufficient concentrations, can adversely affect living organisms.

Dissolved Oxygen (DO) – the oxygen freely available in water. DO is vital to fish and other aquatic life and for the prevention of odors. Traditionally, the level of DO has been accepted as the single most important indicator of a water body's ability to support desirable aquatic life.

Drainfield – part of an on-site septic system; it is the area of ground and system of subsurface pipes or chambers into which partially treated wastewater from the septic tank is discharged for final treatment and absorption by the soil.

Escherichia coli (E. coli) –rod shaped bacteria that reside and multiply in the gut of warm blooded animals. They are used to indicate recent fecal matter contamination in water.

Ecosystem – the community of living things and the nonliving environment.

Erosion – the process by which a material is worn away by flowing water, wave action, or wind. Erosion is often intensified by human activities, such as land clearing and channelization.

Excessive algae – an over-abundance of algae due to excessive nutrients, resulting in decreased DO in the stream, negative change in the habitat for aquatic organisms or odor.

Floodplain – a strip of relatively flat and normally dry land alongside a stream, river, or lake that is covered by water during a flood. A 100 year flood does not refer to a flood that occurs once every 100 years, but to a flood level with a 1 percent chance of being equaled or exceeded in any given year.

Groundwater – water that is stored underground in pore spaces within rocks and other alluvial material, including aquifers. Recharge of groundwater occurs when rainfall seeps into the subsurface. Groundwater can discharge into creeks where the water table intersects the stream channel.

Habitat – the place where an organism lives, nests, finds food and/or takes cover.

Herbicide – a type of pesticide used to kill undesired plants.

Impaired – detrimental effect on the biological integrity of a water body caused by an impact that prevents attainment of the designated use.

Impervious cover – a material on the land surface that water cannot infiltrate. It is usually material like concrete, asphalt, metal or brick (Basin Quest-Chapter 8.2).

Instream flow – An instream flow is an amount of water running in a river, usually measured by the volume moving down the channel in a specified amount of time (discharge). A variety of instream flows are required to maintain a healthy river.

Intermittent stream – has flowing water during certain times of the year. During dry periods, these streams may not have flowing water. These streams are often called dry streams, creeks or washes.

Invasive species – plant or animal species able to out-compete other species and dominate ecosystems, often becoming the only species present. Usually refers to non-native species.

Native riparian tree – naturally occurring tree along stream banks which is adapted to the local conditions.

Non-native species (also called exotic species) – a species that humans have introduced to a new ecosystem.

Non-point Source Pollution – pollution that cannot be traced back to a single source. Non-point source pollution usually enters the water as overland flow, rather than from a single pipe.

Percolate – when liquid water flows through the soil due to the force of gravity. Water loses gravitational energy when it percolates through the soil.

Perennial stream – has flowing water year-round during a typical year.

Pesticide – any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest. Under United States law, a pesticide is also any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Pool – a deeper, quieter area in a stream where there is no obvious current.

Rain garden – a planted depression that is designed to collect and absorb rainwater runoff, reducing the amount of pollution and sediment reaching creeks and streams.

Runoff – see **Storm water runoff**.

Riffle – a shallow part of a stream that is characterized by turbulent flow of water over stones 2 -10 inches in diameter.

Riparian corridor – the zone of land adjacent to a stream, river or other water course.

Sanitary sewer – an underground system of pipes, manholes, and tunnels that transports waste to a wastewater treatment plant for treatment and eventual re-use or release into creeks.

Sedge – grass-like plants often found growing on wet ground or in water, usually with triangular stems.

Sediment – material that is laid down or deposited by water, air or ice.

Scum – the light solids (oil, grease, hair, etc.) that accumulate on the surface of the water in a septic tank.

Silt fence – a temporary sediment control device used on construction sites to protect water quality in nearby streams, rivers, lakes and bays. A typical fence consists of a piece of synthetic filter fabric (also called a geotextile) stretched between a series of wooden or metal stakes.

Sludge – the heavier solids that separate from wastewater inside the septic tank and sink to the bottom. These solids accumulate and must be removed periodically by pumping.

Storm sewer – a system of storm drains, channels and pipes that rapidly transports storm water runoff from streets, sidewalks and other impervious cover into streams with little or no treatment.

Storm water runoff (or runoff) – water that flows over the surface of the land when rainfall is not able to infiltrate the soil, either because the soil is already saturated with water or because the land surface is impervious. Storm water can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river or wetland.

Stream buffer – zones of variable width which are located along both sides of a stream and are designed to provide a protective natural area along a stream corridor.

Stream flow (also referred to as **flow**) – the rate at which a volume of water passes a given point in a stream, usually expressed in cubic feet per second (cfs).

Subwatershed – a smaller basin within a larger drainage area where all surface water drains to a central point.

Surface water – all water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.) and all springs, wells or other collectors directly influenced by surface water.

Suspended sediment – fine material or soil particles suspended in water by the current.

Swale – an open drainage channel or depression explicitly designed to detain and promote the filtration of storm water runoff.

Tillage – the mechanical manipulation of soil performed to nurture crops. Tillage can be performed to accomplish a number of tasks including: seedbed preparation, weed control, and crop chemical incorporation.

Vegetative litter – organic waste material which has been disposed of in areas not designated for solid waste disposal.

Water body – a stream, river or lake that receives the runoff water from a watershed.

Water quality – a measure of the suitability of water for a particular use based on selected physical, chemical and biological characteristics. To determine water quality, scientists first measure and analyze characteristics of the water such as temperature, dissolved mineral content and number of bacteria. Selected characteristics are then compared to numeric standards and guidelines to decide if the water is suitable for a particular use.

Watershed – all of the land area that drains water to a common point, usually a lake, river or stream.

Watershed divides – lines that separate watersheds.

Water table – the top of the water surface in the saturated part of an aquifer.

Appendix

Appendix “Plants 1”:

Common Native Plants in the San Antonio River Riparian Corridor*

TREES		
Name	Wildlife Benefits	Landscape Comments
Black willow (<i>Salix nigra</i>)	<ul style="list-style-type: none"> • Early season harvest for songbirds, waterfowl & small mammals • Larval Host – Mourning Cloak, Viceroy, Red-spotted Purple, Viceroy & Tiger Swallowtail butterflies 	The young stems are very flexible and are used in basket and furniture making.
Cedar elm (<i>Ulmus crassifolia</i>)	<ul style="list-style-type: none"> • Seeds – granivorous birds & small mammals • Larval food – Mourning Cloak & Question Mark butterflies 	A nicely-proportioned, hardy, drought tolerant shade tree for many soil types; leaves can be yellow in fall or may be evergreen
Hackberry (<i>Celtis</i> species)	<ul style="list-style-type: none"> • Fruit – quail, pheasants, cedar waxwings, woodpeckers, robins, mockingbirds, & other songbirds • Sugar hackberry (<i>C. laevigata</i>) is a larval host and/or nectar source for Hackberry Emperor butterfly • Common hackberry (<i>C. occidentalis</i>) is larval host for Question Mark, Mourning Cloak, & American Snout butterflies 	This very important wildlife plant colonizes readily and often grows in fencerows and vacant lots
Pecan (<i>Carya illinoensis</i>)	<ul style="list-style-type: none"> • Fruit – mammals & birds • Larval Host – Gray hairstreak butterfly 	Excellent nut and shade tree that is long-lived and conspicuous in the fall
Sycamore (<i>Platanus occidentalis</i>)	<ul style="list-style-type: none"> • Attracts birds 	Drought tolerant tree that grows quickly and can grow in difficult sites; bark can be a striking feature, called “camouflage bark” that readily exfoliates.
SHRUBS & VINES		
Name	Wildlife Benefits	Landscape Comments
False willow/Roosevelt weed (<i>Baccharis neglecta</i>)	<ul style="list-style-type: none"> • Nectar – many pollinators, including some butterflies 	Colonizes readily; showy, silky silver-white flowers
Bluewood condalia, Brazil (<i>Condalia hookeri</i>)	<ul style="list-style-type: none"> • Fruit – gray fox, raccoon, and various birds • Larval host and/or nectar source for Tamaulipan agapema & Snout butterfly 	Attractive with ornamental fruits; often form thickets; spiny twigs/thorns
Buttonbush (<i>Cephalanthus occidentalis</i>)	<ul style="list-style-type: none"> • Seeds – shorebirds, ducks and other water birds • Nectar – butterflies, bees & other insects 	Attractive ornamental suited to wet soils with showy flowers resembling pincushions followed

	<ul style="list-style-type: none"> Larval host and/or nectar source - Titan sphinx & Hydrangea sphinx 	by showy, button-like balls of fruit
Mustang grape (<i>Vitis mustangensis</i>)	<ul style="list-style-type: none"> Fruit – birds & small mammals 	Twines on fences & other plants; ornamental fruits
Roughleaf dogwood (<i>Cornus drummondii</i>)	<ul style="list-style-type: none"> Fruit – birds Nectar – insects 	Attractive and showy with ornamental blooms; leaves turn red in the fall; provides erosion control
WILDFLOWERS (FORBS)		
Name	Wildlife Benefits	Landscape Comments
Arrowhead (<i>Sagittaria latifolia</i>)	<ul style="list-style-type: none"> Starchy tubers – preferred by at least fifteen species of ducks & by snapping turtles; also eaten by muskrats 	Aquatic perennial; flowers have showy, white petals
Bush sunflower (<i>Simsia calva</i>)	<ul style="list-style-type: none"> Seed – songbirds Nectar – butterflies 	Extremely drought tolerant plant that can tolerate sandy to heavy clay soils; yellow flowers
Frogfruit (<i>Phyla nodiflora</i>)	<ul style="list-style-type: none"> Nectar – butterflies Larval host – Buckeye, Phaon Crescentspot, and White Peacock butterflies 	Excellent ground cover that spreads vigorously; can tolerate drought & flooding; evergreen in warm years and in areas protected from frost
Pickerelweed (<i>Pontederia cordata</i>)	<ul style="list-style-type: none"> Nectar – butterflies & bees 	Aquatic perennial with showy blue hyacinth-like flowers that bloom through the summer
Water primrose (<i>Ludwigia octovalvis</i>)	<ul style="list-style-type: none"> Host plant – Water-primrose hornworm moth 	Shrubby herbaceous plant that grows in moist soil or shallow water; bright yellow flowers; fast growing and reseeds heavily.
GRASSES, SEDGES, & RUSHES		
Name	Wildlife Benefits	Landscape Comments
Bushy bluestem (<i>Andropogon glomeratus</i>)	<ul style="list-style-type: none"> Seeds – granivorous birds & small mammals Winter food for field sparrows, juncos, prairie chickens and other song birds Larval host – Skipper & Satyr butterflies 	Striking in fall and winter when the feathery flowers catch the sunlight; turns salmon-orange color in fall
Eastern gamagrass (<i>Tripsacum dactyloides</i>)	<ul style="list-style-type: none"> Seeds – granivorous birds & deer Larval host – Byssus Skipper butterfly 	This grass grows large and stately with an interesting seed head
Inland sea oats (<i>Chasmanthium latifolium</i>)	<ul style="list-style-type: none"> Seeds – granivorous birds & small mammals Larval host – Pepper & salt skipper, Bells road side skipper, & Bronzed roadside skipper butterflies 	Shade-tolerant grass with large, graceful seed heads; will remain attractive through most of the winter
Switchgrass (<i>Panicum virgatum</i>)	<ul style="list-style-type: none"> Larval host – Delaware Skipper & Dotted Skipper butterflies 	Attractive accent plant in a garden or meadow; yellow-colored clumps last throughout the winter; tolerates seasonal poor drainage
Wild rye (<i>Elymus</i> species)	<ul style="list-style-type: none"> Seeds – granivorous birds & small mammals Canada wild rye (<i>E. canadensis</i>) is a larval host for Zabulon skipper butterfly 	Attractive spike-shaped seed heads of oat-like seeds with long, bristly awns

* Table adapted from Lady Bird Johnson Wildflower Center Native Plant Information Network
<http://www.wildflower.org/>

Appendix “Plants 2”:

Native plant alternatives for non-native, invasive plants commonly found in residential landscapes and the San Antonio River riparian corridor*

NON-NATIVE INVASIVE	NATIVE PLANT ALTERNATIVE
TREES & SHRUBS	
Chaste tree (<i>Vitex agnus-castus</i>)	Wild olive (<i>Cordia boissieri</i>) – a small tree or shrub usually 2-3 feet tall, but can reach up to 30 feet; large white flowers bloom throughout the year; can survive freezes except in the most extreme situations, but will die back to the ground
	Texas mountain-laurel (<i>Sophora secundiflora</i>) – usually a multi-trunked shrub or small tree; Dense, dark green, glossy foliage is evergreen; showy bluish-lavender flowers in drooping clusters are very fragrant; bright red poisonous seeds; needs good drainage; slow grower
	Red buckeye (<i>Aesculus pavia</i>) – handsome shrub with showy, spike-like clusters of deep red, funnel-shaped flowers; grows best in sandy soil; drops leaves at the end of summer; seeds and young shoots are considered poisonous.
	Mexican buckeye (<i>Ungnadia speciosa</i>) - outstanding small specimen tree or tall background shrub; pink flowers; leaves turn yellow in the fall; rapid-growing, drought-resistant, resistant to cotton root rot, and can be pruned to encourage a single trunk.
Chinaberry (<i>Melia azedarach</i>)	Pecan (<i>Carya illinoensis</i>) - excellent nut and shade tree that is long-lived and conspicuous in fall; massive-trunked, with stout branches that can support a symmetrical, oval crown; one of the most valuable cultivated plants originating in North America.
	Western Soapberry (<i>Sapindus saponaria var. drummondii</i>) – attractive, hardy tree, useful as a specimen or in groves; tolerant of drought, wind, heat, poor soil, air pollution and other city conditions; fruits are considered to be poisonous to humans but produce a good lather in water and are used in Mexico as a laundry soap; often suckers and form groves
Chinese tallow (<i>Triadica sebifera</i>)	Cedar elm (<i>Ulmus crassifolia</i>) – nicely-proportioned, hardy, drought tolerant shade tree for many soil types; leaves can be yellow in fall or may be evergreen
	Sycamore (<i>Platanus occidentalis</i>) – drought tolerant tree that grows quickly and can grow in difficult sites; bark can be a striking feature, called “camouflage bark” that readily exfoliates.
Sacred bamboo, Nandina (<i>Nandina domestica</i>)	Yaupon holly (<i>Ilex vomitoria</i>) – picturesque, upright, single- or multi-trunked shrub or small tree, growing 12-25 ft tall; tolerates drought & poor drainage; attractive red berries but both male & female plants are needed for berries
	Texas sage (<i>Leucophyllum frutescens</i>) – bright pink-lavender flowers and silvery gray to greenish leaves; makes a good screen or hedge; easy to grow with good drainage; drought and heat-tolerant
	Barbados cherry, Wild crapemyrtle (<i>Malpighia glabra</i>) – attractive pink flowers April to October followed by large, bright red fruit; useful as a dense screening hedge that may be left soft, sheared, or as a specimen.
Privet (<i>Ligustrum</i> species)	Yaupon holly (<i>Ilex vomitoria</i>) – see description above
	Blackhaw (<i>Viburnum prunifolium</i>) – sturdy, shapely shrub or small tree 12-15 ft tall, sometimes growing to 30 ft; white flower clusters followed by yellow berries turning blue-black; attractive, dark-green foliage becomes reddish-purple in fall
WILDFLOWERS (FORBS)	
Elephant ears, Coco yam (<i>Colocasia esculenta</i>)	Arrowhead (<i>Sagittaria latifolia</i>) – aquatic emergent perennial with arrowhead shaped leaves; flowers have showy white petals
Mexican petunia (<i>Ruellia brittoniana</i>)	Pickerelweed (<i>Pontederia cordata</i>) – aquatic perennial with blue hyacinth-like flowers that bloom through the summer
	Scarlet Sage (<i>Salvia coccinea</i>) – showy annual that reseeds easily and grows in shade; several whorls of red flowers form an interrupted spike; easy to grow
	Blue curls (<i>Phacelia congesta</i>) – leafy annual or biennial which grows 1-3 ft.

	tall; numerous purple to lavender-blue, bell-shaped flowers, in coiled clusters which uncurl as the buds develop; usually found in large colonies
GRASSES	
Bamboo** (<i>Phyllostachys aurea</i>)	Wax myrtle (<i>Morella cerifera</i>) – wispy, multi-trunked, evergreen shrub, usually 6-12 ft tall, can reach 20 ft; pale blue berries occur on female plants in winter
Giant cane, Georgia cane** (<i>Arundo donax</i>)	Yaupon holly (<i>Ilex vomitoria</i>) – see description above
Bermudagrass (<i>Cynodon dactylon</i>)	Buffalograss (<i>Bouteloua dactyloides</i>) – soft, gray-green, perennial turf grass which grows 3-12 in. if left un-mowed; long-lived, warm-season, sod-forming grass has curly leaf blades, slender stems and compact seed heads
	Blue grama (<i>Bouteloua gracilis</i>) – drought-resistant, grows 12-14 in. in full flower; fine-leaved and produces blue-green seedheads which are suspended horizontally like tiny brushes from the tip of each stem; tan color when dormant

* Table adapted from Lady Bird Johnson Wildflower Center Native Plant Information Network

<http://www.wildflower.org/>

** These non-native grasses physically appear more similar to shrubs which is why the suggested native alternatives are shrubs or small trees rather than grasses

Date: 08/27/2009

Goliad Flotilla Host

Submitted By: Karen Bishop, Executive
Offices

Division: Executive Offices

Department:

Information

CAPTION

**PRESENTATION AND DISCUSSION REGARDING THE SAN ANTONIO
RIVER AUTHORITY'S ROLE AS THE GOLIAD FLOTILLA EVENT HOST**

Presenter

Dale Bransford

Estimated Presentation Time: 10 minutes

By letter dated February 10, 2009, the Canoe Trail Goliad requested the San Antonio River Authority (SARA) to consider becoming the "Named Official Host Agency" for the two annual organized canoe/kayak floats held on the Goliad Paddling Trail: the summer flotilla held the first Saturday in June and the fall flotilla held the first Saturday in November.

Following this request, SARA staff gave a presentation to the Canoe Trail Goliad Board at its April meeting, indicating that SARA was favorable toward the request. At its July meeting, the Canoe Trail Goliad Board voted to name SARA the flotillas' Official Host Agency. Staff requested that the Canoe Trail Board appoint a committee to serve as a Transition Team as SARA assumes this role and to help staff identify any additional services SARA might be able to provide to enhance paddlers' experience on the river. The team will be discussed at the Canoe Trail Goliad's September meeting.

SARA will assume responsibilities as event host for the 7th Annual Fall Flotilla scheduled November 7.

Discussion

Date: 08/27/2009

River Reach Newsletter Revisions Update

Submitted By: Steven Schauer,
Intergovernmental and
Comm Relations

Division: Intergovernmental and
Comm Relations

Department:

Information

CAPTION

PRESENTATION AND DISCUSSION REGARDING REVISIONS TO THE SAN ANTONIO RIVER AUTHORITY'S QUARTERLY RIVER REACH NEWSLETTER

Presenter

Steven Schauer

Estimated Presentation Time: 10 minutes

The Intergovernmental and Community Relations (IGCR) Department will launch a new look and additional content for the River Reach quarterly newsletter beginning in September 2009. The existing layout has been in existence since the newsletter's inception in 2003.

The new layout will have an upgraded professional magazine style. This new layout will be more visually appealing to the audience while creating additional space to provide more information to the readers.

With this space, permanent sections will be added to each edition, such as "Green Living" to encourage best management practices throughout our river basin. A "Native Species" section will be added to introduce many of the native species that can be found in and along the river as well as identifying those native species anticipated to return to the Mission Reach segment as part of the ecosystem restoration project. An "Upcoming Events" section will be added in each issue outlining River Authority events as well as those that the River Authority participates in. There will be a "Question and Answer" section that will provide answers to one or two questions per issue on topics related to the River Authority. Finally, there will be space available for two board members' articles per issue, highlighting one board member from Bexar County and one from either Wilson, Karnes, or Goliad County.

The IGCR Department intends to expand the use of this tool as an outlet to enhance community appreciation for the San Antonio River basin. To do so, the IGCR Department is coordinating with the Information Technology Department on developing an electronic version of the River Reach. While the print version is expanding in content, there is no intention at this time to increase the printing budget to support the publication. Developing and promoting the use of the electronic version will allow for increased exposure for the publication while maintaining the current printing budget.

Discussion

Date: 08/27/2009

Web Sites' Revisions Update

Submitted By: Steven Schauer,
Intergovernmental and
Comm Relations

Division: Intergovernmental and
Comm Relations

Department:

Information

CAPTION

PRESENTATION AND DISCUSSION REGARDING REVISIONS TO THE SAN ANTONIO RIVER AUTHORITY'S WEB SITES

Presenter

Steven Schauer, Jordan Merson and Clint Marzec

Estimated Presentation Time: 10 minutes

The San Antonio River Authority oversees the content and technical maintenance of eight external web sites for the purpose of disseminating information to the public on a variety of topics related to the River Authority's mission. The eight external web sites are: www.sara-tx.org; www.sanantonioriver.org; www.BexarFloodFacts.org; www.SARAFloodfacts.org; www.westsidecreeks.com; www.riverrec.org; www.regionalwateralliance.org; and the River Authority's Face Book page.

Each of these sites was created and designed independent of the others. As a result, there is little congruity between the sites, and in many instances the sites are not appropriately linked; therefore, there is no consistent brand identification for the River Authority between these various web sites. Additionally, the volume of content found on each of these sites can be overwhelming to the site visitor making the experience not very user friendly. This volume can also be difficult for River Authority staff to maintain and keep updated.

Given the current state of the River Authority's web sites, the Intergovernmental and Community Relations (IGCR) Department and the Information Technology (IT) Department have begun a process to work in cooperation with the other River Authority departments to complete a comprehensive reconfiguration and redesign of these web sites. The intent of this process will be to review and update, as necessary, the various web sites and, in doing so, to create a more uniform and consistent approach to the River Authority's use of these important communication tools. The first two web sites to undergo this review process will be www.sara-tx.org and www.sanantonioriver.org. Work on these two web sites should be done by October 2009 and then two additional web sites will be reviewed until all the web sites have been updated and integrated.

Discussion

Date: 08/27/2009

Professional Services

Submitted By: Steven Schauer,
Intergovernmental and
Comm Relations

Division: Intergovernmental and
Comm Relations

Department:

Information

CAPTION

**REVIEW AND DISCUSSION OF CONSULTANT SELECTION ACTIVITIES
AND/OR CONSULTANT CONTRACT AUTHORIZATION, RENEWALS,
AMENDMENTS OR EXTENSIONS:**

- **PROFESSIONAL SERVICES CONTRACT FOR THE SAN ANTONIO RIVER IMPROVEMENTS PROJECT MUSEUM REACH 2010 EVENT OPPORTUNITIES REQUEST FOR PROPOSAL (RFP)**
- **PROFESSIONAL SERVICES CONTRACT FOR THE MUSEUM REACH HOLIDAY REQUEST FOR PROPOSAL (RFP)**

Presenter

Steve Graham and Steven Schauer

Estimated Presentation Time: 15 minutes

Staff will review with the Board of Directors consultant selection activities and/or consultant contract authorizations, renewals, amendments or extensions. Specifically, current activities for the following consultant services will be reviewed:

Within its operations and maintenance responsibilities, the San Antonio River Authority has the ability to organize and hold public events along the Museum Reach Urban Segment, Eagleland and Mission Reach segments of the San Antonio River Improvements Project. The River Authority also has the ability to approve other activities along these segments (e.g. weddings, fundraisers, charity walks or rides, etc.). Revenue generated for the River Authority by these public and/or special events will be used by the River Authority to offset the operations and maintenance costs to care for these segments.

2010 Event Design and Implementation

The River Authority is in the process of identifying further events to host along this segment throughout the calendar year of 2010 and beyond. A Request for Proposals (RFP) is being developed to solicit consultant proposals to assist with the event design and implementation for 2010 and beyond. It is anticipated that this RFP will be issued in September or October with the intent of securing a consultant by December.

2009 Holiday Events

Planning is also currently underway to develop and implement future public events and activities along the Museum Reach, with a particular focus on the upcoming holiday season. An RFP was issued on June 30, 2009 to seek consultant services to assist with potential events or activities to be held in that reach from November 2009 to January 2010. It is anticipated that a consultant will be selected by the end of August.

Discussion

Date: 08/27/2009

75 Years of Service Update

Submitted By: Karen Bishop, Executive
Offices

Division: Executive Offices

Department:

Information

CAPTION

**STATUS REPORT ON THE 75 YEARS OF SARA SERVICE PROJECT,
INCLUDING DISCUSSION OF GRANT APPLICATION STATUS**

Presenter

Karen Bishop

Estimated Presentation Time: 5 Minutes

To date, staff efforts on the 75 Years of SARA Service Project have focused on application to the Summerlee Foundation, the National Endowment for the Humanities, and the National Historical Publications and Records Commission for grant funding to support enhancement, promotions, and public accessibility of the River Authority's Urban Watershed Management System Archives Collection.

During the meeting, staff will provide an update of the grant application status and will discuss next steps with the Committee.

Discussion

Date: 08/27/2009

GM's Report

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Submitted For: Suzanne B. Scott

Department:

Information

CAPTION

GENERAL MANAGER'S REPORT

- **UPCOMING EVENTS CALENDAR,**
- **FUTURE BOARD AND/OR COMMITTEE MEETINGS, AND**
- **MEETINGS INVOLVING THE ATTENDANCE OF ONE OR MORE BOARD MEMBERS.**

Presenter

Suzanne B. Scott

Estimated Presentation Time: 5 minutes

Discussion

Communications Committee

17.

Date: 08/27/2009

Adjourn

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Department:

Information

CAPTION

ADJOURN

Presenter

Mr. Rodríguez, Committee Chairman
