

AGENDA

MEETING OF THE BOARD OF DIRECTORS' OPERATIONS COMMITTEE AND OF THE BOARD OF DIRECTORS

SAN ANTONIO RIVER AUTHORITY

November 2, 2009, 2:00 p.m.

**Estimated Presentation Time: 3 hours*



GENERAL AND CEREMONIAL ITEMS:

Estimated Presentation Time: 5 minutes

1. **CALL TO ORDER BY THE CHAIRMAN, MR. H. B. RUCKMAN III**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL BY THE SECRETARY, MS. ADAIR R. SUTHERLAND**
 - John J. Flieller

 - Hector R. Morales

 - Názirite Rubén Pérez

 - H. B. Ruckman III

 - Adair R. Sutherland

 - Thomas G. Weaver

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 OPERATIONS COMMITTEE MEETING HELD ON OCTOBER 5, 2009**
- 8. RECESS OPERATIONS COMMITTEE AND CONVENE BOARD OF DIRECTORS MEETING**
- 9. CALL TO ORDER OF THE BOARD OF DIRECTORS MEETING**
- 10. ROLL CALL**
- 11. CERTIFICATION OF A QUORUM**
- 12. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING THE WASTEWATER BILLING LIMITED PURPOSE AUDIT**
- 13. ADJOURN MEETING OF THE BOARD OF DIRECTORS**
- 14. RECONVENE AS OPERATIONS COMMITTEE**
- 15. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING THE CITY OF KENEDY'S INVITATION TO PARTICIPATE IN A CITY INITIATED TAX INCREMENT REINVESTMENT ZONE**
- 16. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A REQUEST FOR FINANCIAL ASSISTANCE FROM THE SAN ANTONIO ALTERNATIVE HOUSING CORPORATION TO PROVIDE FOR THE DEVELOPMENT OF A LINEAR PARK ALONG APACHE CREEK WITHIN THE PROJECT LIMITS OF THE WESTSIDE CREEKS RESTORATION PROJECT**
- 17. DISCUSSION AND APPROPRIATE ACTION REGARDING AN INTERLOCAL AGREEMENT WITH THE ALAMO COMMUNITY COLLEGE DISTRICT, CITY OF LIVE OAK, AND UNIVERSAL CITY FOR REUSE WATER FROM THE SALATRILLO WASTEWATER TREATMENT SYSTEM**
- 18. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO EXECUTE A PERMANENT WATER EASEMENT AND TEMPORARY CONSTRUCTION EASEMENT BETWEEN THE SAN ANTONIO RIVER AUTHORITY AND THE SAN ANTONIO WATER SYSTEM FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF A WATER LINE WITHIN SAN ANTONIO RIVER RIGHT-OF-WAY AND TO BE LOCATED UNDER THE MISSION ROAD BRIDGE, BEXAR COUNTY, TEXAS**
- 19. BRIEFING REGARDING A POTENTIAL IMPLEMENTATION PLAN IDENTIFYING BEST MANAGEMENT PRACTICES TO ADDRESS E. COLI IN THE LOWER SAN ANTONIO RIVER**

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

CONTRACT AMENDMENT BETWEEN THE SAN ANTONIO RIVER AUTHORITY AND BIO-WEST INC. FOR PROFESSIONAL SERVICES FOR THE LOWER SAN ANTONIO INSTREAM FLOWS STUDY, DESIGN AND IMPLEMENTATION PROJECT

- 21. EXECUTIVE SESSION PURSUANT TO TEXAS GOVERNMENT CODE SECTION 551.072 FOR DELIBERATION REGARDING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF REAL PROPERTY TO BE ACQUIRED IN BEXAR COUNTY, TEXAS, AS PART OF THE SAN ANTONIO RIVER NATURE PARK SYSTEM**
- 22. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION CONCERNING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF REAL PROPERTY TO BE ACQUIRED IN BEXAR COUNTY, TEXAS, AS PART OF THE SAN ANTONIO RIVER NATURE PARK SYSTEM**
- 23. STATUS REPORT ON THE SAN ANTONIO RIVER IMPROVEMENTS PROJECT**
- 24. GENERAL MANAGER'S REPORT CONCERNING THE FOLLOWING:**
- UPCOMING EVENTS CALENDAR,**
 - FUTURE BOARD AND/OR COMMITTEE MEETINGS, AND**
 - MEETINGS INVOLVING THE ATTENDANCE OF ONE OR MORE BOARD MEMBERS.**
- 25. ITEMS FOR FUTURE CONSIDERATION**
- 26. NEXT MEETING DATE**
- 27. ADJOURN**

Estimated Presentation Time: 3 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' Operations 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' Operations 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.

Operations Committee

Individual Items 7.

Date: 11/02/2009

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 OPERATIONS COMMITTEE MEETING
HELD ON OCTOBER 5, 2009**

Presenter

Mr. Ruckman, Committee Chair

Estimated Presentation Time: 5 minutes

Discussion

Attachments

Link: October 5, Ops Minutes

MINUTES

**MEETING OF THE BOARD OF DIRECTORS' OPERATIONS
COMMITTEE**

SAN ANTONIO RIVER AUTHORITY

October 5, 2009, 2:00 p.m.



GENERAL AND CEREMONIAL ITEMS:

- 1. CALL TO ORDER WAS MADE BY THE CHAIRMAN, MR. H. B. RUCKMAN III, AT 2:11 P.M.**
- 2. PLEDGE OF ALLEGIANCE WAS CONDUCTED**
- 3. THE SECRETARY, MS. ADAIR R. SUTHERLAND, CALLED THE ROLL AND REPORTED THE FOLLOWING COMMITTEE MEMBERS PRESENT:**

- John J. Flieller**
- Hector R. Morales**
- Názirite Rubén Pérez**
- H. B. Ruckman III**
- Adair R. Sutherland**
- Thomas G. Weaver**

- 4. CERTIFICATION OF A QUORUM WAS ANNOUNCED BY THE SECRETARY, MS. SUTHERLAND**

- 5. INTRODUCTION OF VISITORS**

Ms. Moreno announced the visitors present.

- 6. CITIZENS TO BE HEARD**

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

7. **APPROVAL OF THE MINUTES FOR THE OPERATIONS COMMITTEE MEETING HELD ON SEPTEMBER 8, 2009**

Staff recommended a motion to approve the minutes of the Operations Committee meeting held on September 8, 2009, as presented.

Motion made by Thomas G. Weaver

Seconded by Názirite Rubén Pérez

Motion passed unanimously

8. **PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING REQUESTS FOR SARA TO ASSIST IN THE FINANCING OF PROJECTS AND STUDY EFFORTS THAT SERVE A COMMUNITY NEED AND ADVANCE SARA'S MISSION AND GOALS**

There being no action taken on this item and to accommodate visitors in the audience, Mr. Ruckman called for Agenda Item 10.

10. **DISCUSSION AND APPROPRIATE ACTION REGARDING SAN ANTONIO RIVER AUTHORITY PARTICIPATION WITH THE CITY OF SAN ANTONIO AND POTENTIAL FINANCING OF A MASTER PLAN STUDY FOR THE CITY OF SAN ANTONIO-INITIATED TAX INCREMENT REINVESTMENT ZONE NUMBER 31 KNOWN AS MIDTOWN**

Staff recommended a motion indicating Operations Committee support for a recommending to the San Antonio River Authority Board of Directors authorizing the General Manager to negotiate the terms and conditions of a Memorandum of Understanding with the City of San Antonio to finance, in an amount not to exceed \$350,000 with appropriate reimbursement arrangements from the proceeds from the TIRZ, and facilitate the development of a master plan study for the City of San Antonio-initiated Tax Increment Reinvestment Zone Number 31 known as Midtown.

Motion made by Thomas G. Weaver

Seconded by John J. Flieller

Motion passed unanimously

Mr. Ruckman returned to Agenda Item 9

9. **PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A PROPOSED RESOLUTION BY THE SAN ANTONIO RIVER AUTHORITY BOARD OF DIRECTORS AUTHORIZING THE GENERAL MANAGER TO EXECUTE AN AGREEMENT BETWEEN THE SAN ANTONIO RIVER AUTHORITY AND THE CITY OF UNIVERSAL CITY, TEXAS, FOR THE PURCHASE AND FINANCING OF EDWARDS UNDERGROUND WATER RIGHTS**

Staff recommended a motion indicating Operations Committee support for presenting to the San Antonio River Authority Board of Directors a recommendation to approve and authorize the General Manager to execute an Agreement between the San Antonio River Authority and the City of Universal City, Texas, for the purchase and financing of Edwards Underground Water Rights.

Motion made by John J. Flieller

Seconded by Názirite Rubén Pérez

Motion passed unanimously

Having already discussed Item 10, Mr. Ruckman called for Agenda Item 11.

11. PRESENTATION, DISCUSSION, AND APPROPRIATE ACTION REGARDING A RESOLUTION AUTHORIZING THE EXECUTION OF AN INTERLOCAL AGREEMENT BETWEEN BEXAR-MEDINA-ATASCOSA COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT NO. 1, BEXAR COUNTY, THE SAN ANTONIO RIVER AUTHORITY, THE BEXAR METROPOLITAN WATER DISTRICT, AND THE EDWARDS AQUIFER AUTHORITY RELATING TO A PROJECT TO UPGRADE MEDINA DAM AND FINANCING OPTIONS

Staff recommended a motion indicating Operations Committee support for staff to present to the San Antonio River Authority Board of Directors a resolution authorizing the Board Chairman to execute an Interlocal Agreement between Bexar-Medina-Atascosa Counties Water Control and Improvement District No. 1, Bexar County, San Antonio River Authority, the Bexar Metropolitan Water District, and the Edwards Aquifer Authority relating to a project to upgrade Medina Dam.

Motion made by Thomas G. Weaver

Seconded by John J. Flieller

Motion passed unanimously

12. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION AUTHORIZING THE GENERAL MANAGER TO RENEW THE INTERLOCAL AGREEMENT WITH THE PUBLIC IMPROVEMENT DISTRICT IN THE DOWNTOWN AREA FOR THE MUSEUM REACH SANITATION SERVICES

Staff recommended a motion indicating Operations Committee support for staff to present to the San Antonio River Authority Board of Directors a recommendation that the General Manager be authorized to renew the interlocal agreement with the Public Improvement District in the Downtown Area for sanitation services in the Museum Reach.

Motion made by Adair R. Sutherland

Seconded by John J. Flieller

Motion passed unanimously

13. DISCUSSION AND APPROPRIATE ACTION REGARDING A RESOLUTION IN SUPPORT OF A CITY OF SAN ANTONIO INITIATIVE TO ESTABLISH A CENTRO PARTNERSHIP FOCUSED ON BUSINESS ATTRACTION AND RETENTION, PARKING AND TRANSPORTATION MANAGEMENT, AND REAL ESTATE ACQUISITION AND DEVELOPMENT WITHIN DOWNTOWN SAN ANTONIO

Staff recommended a motion of the Operations Committee supporting presentation of a resolution to the San Antonio River Authority Board of Directors supporting the initiative by the City of San Antonio to establish a Centro Partnership focused on business attraction and retention, parking and transportation management, and real estate acquisition and development within downtown San Antonio and, further, encouraging the City of San Antonio to promote broad-based community input into the development of the vision for downtown while promoting openness and public accountability in the operation of the Centro Partnership.

Motion made by Thomas G. Weaver

Seconded by John J. Flieller

Motion passed unanimously

14. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING RESOLUTIONS ASSOCIATED WITH FOUR PROPOSALS TO THE ALAMO AREA COUNCIL OF GOVERNMENTS' SOLID WASTE GRANT PROGRAM:

- **EDUCATION AND TRAINING PROJECT**
- **LOCAL ENFORCEMENT APPLICATION**
- **WILSON COUNTY'S HAZARDOUS HOUSEHOLD WASTE, EWASTE AND TIRE PICK-UP PROGRAM**
- **KARNES COUNTY HAZARDOUS HOUSEHOLD WASTE AND TIRE PICK-UP PROGRAM**

Staff recommended a motion indicating Operations Committee support for presenting to the San Antonio River Authority Board of Directors a resolution related to the AACOG Solid Waste Grant Program authorizing the General Manager to file a grant application of \$50,000 for an illegal dumping education program; a resolution authorizing the General Manager's filing of a grant application for \$10,000 for a surveillance camera; and support for presenting to the San Antonio River Authority Board of Directors a resolution related to the AACOG Solid Waste Grant Program affirming our commitment to support the projects proposed by Karnes and Wilson counties for hazardous household waste, e-waste, and abandoned tire pickup events with a cash match of \$2,000 each and in-kind staff support of \$1,200 each.

Motion made by John J. Flieller

Seconded by Názirite Rubén Pérez

Motion passed unanimously

15. PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO CONVEY A PERMANENT EASEMENT TO ENTERPRISE PRODUCTS OPERATING, LLC., ACROSS AND ALONG THE SAN ANTONIO RIVER IN KARNES COUNTY, TEXAS

Staff recommended a motion indicating Operation Committee support for presenting to the San Antonio River Authority Board a recommendation to authorize the General Manager to convey a permanent easement across the San Antonio River to Enterprise Products Operating, LLC., for the purpose of replacing and maintaining a new two-inch natural gas line in Karnes County, Texas.

Motion made by Thomas G. Weaver

Seconded by John J. Flieller

Motion passed unanimously

16. EXECUTIVE SESSION PURSUANT TO TEXAS GOVERNMENT CODE SECTION 551.072 FOR DELIBERATION CONCERNING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF A NATURE PARK AND RIVER ACCESS SITE IN BEXAR COUNTY, TEXAS

After appropriate disclosure in accordance with Chapter 551 of the Texas Government Code, the Open Meetings Act, Section 551.072, Mr. Ruckman then recessed to meet in Executive Session at 3:36 p.m. for deliberation concerning the purchase, exchange, lease, or value of a Nature Park and river access site in Bexar County, Texas. The Executive Session having concluded, the Operations Committee resumed into Open Session at 4:12 p.m.

17. DISCUSSION AND APPROPRIATE ACTION REGARDING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF A NATURE PARK AND RIVER ACCESS SITE IN BEXAR COUNTY, TEXAS

Staff recommended a motion by the Operations Committee to support staff actions and proceed with negotiations on various acquisition opportunities for the property known as Truehart Ranch in Southern Bexar County.

Motion made by Thomas G. Weaver

Seconded by Názirite Rubén Pérez

Motion passed unanimously

18. BRIEFING ON LAND RIGHTS ACQUISITION STATUS

There being no action taken on this item, Mr. Ruckman called for Agenda Item 19.

19. STATUS REPORT ON THE SAN ANTONIO RIVER IMPROVEMENTS PROJECT

There being no action taken on this item, Mr. Ruckman called for Agenda Item 20.

20. GENERAL MANAGER'S REPORT CONCERNING THE FOLLOWING:

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

There being no action taken on this item, Mr. Ruckman called for Agenda Item 21.

21. ITEMS FOR FUTURE CONSIDERATION

There being no action taken on this item, Mr. Ruckman called for Agenda Item 22.

22. NEXT MEETING DATE

The next Operations Committee meeting will be Monday, November 2, 2009, at 2:00 p.m.

23. ADJOURN

There being nothing further to report, Ms. Sutherland moved to adjourn, and therefore, Mr. Ruckman called the meeting adjourned at 4:33 p.m.

PREPARED AND RECOMMENDED FOR BOARD APPROVAL BY THE MANAGER.

SUZANNE B. SCOTT, General Manager

**APPROVED BY THE BOARD OF DIRECTORS' OPERATIONS COMMITTEE AT
THE MEETING HELD ON NOVEMBER 2, 2009.**

H. B. RUCKMAN III, Committee Chairman

ATTEST:

ADAIR SUTHERLAND, Committee Secretary

Date: 11/02/2009

Submitted By: Lupe Moreno, Executive Offices

Division: Executive Offices

Submitted For: Suzanne B. Scott

Department:

8.

Information

CAPTION

RECESS OPERATIONS COMMITTEE AND CONVENE BOARD OF DIRECTORS MEETING

Presenter

Operations Committee Chairman and Board of Directors Chairman

9.

Information

CAPTION

CALL TO ORDER OF THE BOARD OF DIRECTORS MEETING

Presenter

Board Chairman

10.

Information

CAPTION

ROLL CALL

Presenter

Board Secretary

BEXAR COUNTY: GOLIAD COUNTY: KARNES COUNTY: WILSON COUNTY:

- Sally Buchanan Terry E. Baiamonte Gaylon J. Oehlke John J. Flieller
- Hector R. Morales Adair R. Sutherland H. B. Ruckman III A.D. Kollodziej, Jr.
- Jeffrey S. Neathery
- Názirite Rubén Pérez
- Roberto G. Rodríguez
- Thomas G. Weaver

11.

Information

CAPTION

CERTIFICATION OF A QUORUM

Presenter

Board Secretary

Date: 11/02/2009

Wastewater Billing Limited Purpose Audit

Submitted By: Sharon McCoy-Huber,
Support Services

Division: Support Services

Department: Finance

Information

CAPTION

**PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING THE
WASTEWATER BILLING LIMITED PURPOSE AUDIT**

Presenter

Sharon McCoy-Huber; Al Astran; Thompson, Williams, Biediger, Kastor & Young, LC; and Malcolm Pirnie

Estimated Presentation Time: 30 minutes

In October 2007, it was discovered that the Bexar Met Water System had been billing the San Antonio River Authority (River Authority) wastewater customers at the SAWS rate and processing the funds to SAWS. After research by SAWS, Bexar Met and the River Authority, approximately \$150,000 was forwarded to the River Authority from SAWS for reimbursement of funds received from Bexar Met.

At that time, the Board and staff concurred on a need for an external review of the purveyors with which the River Authority contracts. While preparing the Request for Proposal, staff saw the additional need for information in a Geographical Information System (GIS) format. On September 30, 2008, the River Authority executed a contract with the team of Thompson, Williams, Biediger, Kastor & Young, LC, and Malcolm Pirnie to conduct professional services regarding billing and collection services for the River Authority's wastewater systems in eastern and north eastern Bexar County.

The consultants are conducting a limited purpose audit of customer billing, an analysis of business practices, and will make recommendations for the future. Additionally, customer locations and mapping of service infrastructure will be refined and extended to all residential and commercial customers in a GIS format for the Salatrillo and Martinez service areas.

Staff and the consultants will update the Board on the preliminary audit findings.

Recommendation

Motion to be crafted, if necessary, after discussion of this item.

Discussion

Vote

Operations Committee
Date: 11/02/2009

Individual Items 13. - 14.

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Department:

13.

Information

CAPTION

ADJOURN MEETING OF THE BOARD OF DIRECTORS

Presenter

Board Chairman

14.

Information

CAPTION

RECONVENE AS OPERATIONS COMMITTEE

Presenter

Committee Chairman

Date: 11/02/2009

Kenedy TIRZ Participation

Submitted By: Rudy Farias, Operations

Division: Operations

Submitted For: Rudy Farias

Department: Water Resources &
Community Dvlpmnt

Information

CAPTION

PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING THE CITY OF KENEDY'S INVITATION TO PARTICIPATE IN A CITY INITIATED TAX INCREMENT REINVESTMENT ZONE

Presenter

Rudy R. Farias

Estimated Presentation Time: 20 minutes

The City of Kenedy (City), Kenedy 4B, and the Karnes County Community and Economic Development Corporation (KCC&EDC) are working together to attract light industrial, multi-family, and single family housing to the City. These efforts have involved the Kenedy 4B and KCC&EDC purchasing approximately 250 acres of undeveloped land and the City annexing the property. In addition to annexing the property, the City is pursuing the establishment of a tax increment reinvestment zone (TIRZ) on approximately 166.4 acres. The City has requested that all taxing entities express their intent to participate in this City-initiated TIRZ.

Other city-initiated tax increment reinvestment zones that the San Antonio River Authority is currently participating in are Verano at 60% and River North at 100%. Verano is the area in South Bexar County that will be home to the new Texas A&M campus, and River North is in downtown San Antonio primarily around the Museum Reach of the San Antonio River Improvements Project.

Chapter 311 of the Texas Tax Code, the Texas Increment Financing Act, provides that taxing units may pay for certain activities out of incremental taxes attributable to redevelopment and new development in a designated TIRZ. These activities include capital costs and financing costs of redevelopment and new development; the cost of acquisition, demolition, alteration, remodeling, repair or reconstruction of existing buildings and structures; and land acquisition and financing costs.

The City of Kenedy and Kenedy 4B are seeking a master planned development within the TIRZ and are in discussions with Kevin Brown of FPB Land Company located in La Vernia, Texas. Mr. Brown hired Galbraith Engineering who drafted a preliminary site plan that shows 157 single family lots, 56 single family large lots, 18.3 acres of multi-family area, 19 light industrial lots, 1 acre for a day care center, and 1.8 acres for a community park.

Based upon the Tax Increment Financing Evaluation Criteria and a review of the preliminary site plan, River Authority staff has concluded the following:

- **Water Quality/Environmental:** The current land use within the proposed TIRZ is agricultural/pasture land. The anticipated development within the zone would result in an estimated 65% to 85% impervious cover. The development's preliminary plan shows two storm water detention basins which would provide storm water and water quality protection. There are no buffer zones shown within the proposed design. Riparian, wetlands, aquatic, and critical habitats were not identified within the zone due to the higher elevation of the proposed site and the current land uses. The TIRZ drains toward an unnamed tributary which feeds into the Escondido Creek. Only a small portion of the property sites are within a 100-year flood zone, and that flood zone is shown as a future detention basin.
- **Flood Control:** Based upon the draft site plan, storm water peak runoff will be handled by two detention basins. Also, during construction, erosion and sedimentation controls will be in place based upon Texas Commission on Environmental Quality (TCEQ) Storm Water Pollution Prevention Plan Report requirements.
- **Park Services:** The City does not have park or open space requirements in their development code, but the City has adopted the San Antonio River Basin Plan for Nature-based Park Resources Plan (Park Plan). In the Park Plan, the proposed 1.8 acre park is considered a mini-park (under 5 acres). Based upon the Park Plan's needs assessment per county, Karnes County shows a surplus of mini-parks; however, Kenedy does not show any mini-parks within its City limits. Therefore, this park would meet an under-served need in the City.
- **Utilities:** Water and wastewater will be provided by the City of Kenedy. The City has requested a \$3.5 million loan from the River Authority to expand their water and wastewater facilities. In addition to this request, the City has given public notice that they intend to issue debt in the amount of \$3.5 million in the event the loan with the River Authority does not materialize. The current water treatment capacity is sufficient to serve the development, but a new water tank is needed to increase water pressure to better serve the TIRZ. The wastewater treatment system is currently being expanded from a 1 million gallon per day (MGD) treatment plant to 1.5 MGD. Regarding the collection system, a wastewater line will need to be up-sized from a 6 inch to an 8 inch line to serve the TIRZ.
- **Other support:** The City is participating at 90% for the life of the TIRZ, which will be either 20 or 25 years. Karnes County is participating at 75%, Karnes County Hospital District at 90%, and the Escondido Watershed District at 25%. Other taxing entities pending are the Karnes County Fire District and the Evergreen Underground Water Conservation District.
- **Financial Impact:** Currently the property is in the ownership of the Kenedy 4B which does not pay taxes. Once the TIRZ is created and the property sold to the developer, the River Authority will begin receiving taxes based upon the appraised value. The current appraised value is \$336,155. Following the first year, the City projects an increase in the appraised value to \$3,275,900, and at build-out (end of year six) the appraised value is

anticipated to grow to \$32,759,000. Below are the estimated taxes that the River Authority would collect based upon the appraised value projections shared with the River Authority:

<u>Year</u>	<u>Appraised Value</u>	<u>Appraised Value/\$100</u>	<u>SARA Tax Rate</u>	<u>Estimated Taxes</u>
0	\$ 336,155	\$ 3,361.55	\$0.015951	\$ 53.62
1	\$ 3,275,900	\$ 32,759.00	\$0.015951	\$ 522.54
2	\$ 8,189,750	\$ 81,897.50	\$0.015951	\$1,306.35
3	\$13,103,600	\$131,036.00	\$0.015951	\$2,090.16
4	\$19,655,400	\$196,554.00	\$0.015951	\$3,135.23
5	\$26,207,200	\$262,072.00	\$0.015951	\$4,180.31
6	\$32,759,000	\$327,590.00	\$0.015951	\$5,225.39

- Financial Benefit to the Development: The City has projected the public improvements and infrastructure will cost approximately \$4,235,229. It is estimated that, with the increases in appraised value, the City will be able to bond finance the public improvements.

Based upon the available data and efforts of the City, Kenedy 4B, and the Karnes County Community and Economic Development Corporation, there is an overall need and economic benefit associated with the Tax Increment Reinvestment Zone. With a seat on the TIRZ Board, the River Authority will have an opportunity to influence the project and finance plans to reflect the River Authority service area objectives identified in the River Authority’s TIF Policy.

Recommendation

Motion indicating Operations Committee support for presenting to the River Authority Board of Directors a recommendation to participate in the Kenedy Tax Increment Reinvestment Zone at the same level as the City of Kenedy at ninety percent (90%).

Discussion

Vote

Date: 11/02/2009

Financial Assistance to SA Alternative Housing - Westside Creeks**Submitted By:** Rudy Farias, Operations**Division:** Operations**Submitted For:** Rudy Farias**Department:** Water Resources &
Community Dvlpmnt

Information**CAPTION**

PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A REQUEST FOR FINANCIAL ASSISTANCE FROM THE SAN ANTONIO ALTERNATIVE HOUSING CORPORATION TO PROVIDE FOR THE DEVELOPMENT OF A LINEAR PARK ALONG APACHE CREEK WITHIN THE PROJECT LIMITS OF THE WESTSIDE CREEKS RESTORATION PROJECT

Presenter

Rudy R. Farias

Estimated Presentation Time: 10 minutes

The San Antonio Alternative Housing Corporation, through the use of tax increment financing funds, is developing a linear park along Apache Creek from Commerce Street to General McMullen, just upstream of Our Lady of the Lake University and Elmendorf Lake. The funds for this project are identified in the City of San Antonio's Rosedale Tax Increment Reinvestment Zone (TIRZ) Number 2.

The TIRZ was created in 1998 and will expire in 2019. Over the next ten years, the TIRZ is projected to generate an additional \$359,600. The San Antonio Alternative Housing Corporation is requesting financial assistance of \$300,000 to develop the linear park in a single phase which is estimated at just over \$700,000. The \$300,000 will be reimbursed to the River Authority from funds received through the TIRZ. Currently the TIRZ has generated \$410,400 for the development of the park.

The plans for the park call for the installation of a trail eight tenths of a mile long situated along the upper bank of the creek. The trail will be ten feet wide with 6 feet being concrete and 4 feet crushed aggregate. Lighting will also be part of the project, along with bridges, landscaping, a wrought iron fence, signage, benches, trash cans, and an exercise station. The bridges will span existing drainage outfalls and will be similar to bridges found along the City of San Antonio's existing linear park trails as well as at the Brackenridge Golf Course. Once completed, the City of San Antonio Public Works department will maintain the mowing and the City's Parks Department will maintain the added amenities. The estimated time to construct the park is three months.

The recreational trail and other amenities for the project could serve as a demonstration/pilot project for showcasing the potential of the Westside Creeks Restoration Project. The area has mature trees and many species of native plants that will benefit from reduction of invasive species that will be part of the project. The park is several months ahead of the conceptual restoration plan being developed by the Westside Creek Restoration Project, but the plans have been reviewed by the Westside Creeks consultant team and it has been determined any future enhancements, such as modifications to the creek, would dovetail nicely into the park and not directly impact the park amenities.

The Westside Creeks Oversight Committee received a recommendation from the Apache Creek Subcommittee supporting the loan. The Oversight Committee also approved a motion to recommend to the San Antonio River Authority Board of Directors support for the loan in order to use this opportunity to demonstrate the potential of the Westside Creeks Restoration Project.

Recommendation

Motion indicating Operations Committee support for presenting to the River Authority Board of Directors a recommendation to support a \$300,000 request for financial assistance from the San Antonio Alternative Housing Corporation to develop a linear park along Apache Creek from Commerce Street to General McMullen.

Vote

Date: 11/02/2009

Salatrillo Reuse Water Project

Submitted By: Melissa Bryant, Operations

Division: Operations

Department: Water Resources &
Community Dvlpmnt

Information

CAPTION

DISCUSSION AND APPROPRIATE ACTION REGARDING AN INTERLOCAL AGREEMENT WITH THE ALAMO COMMUNITY COLLEGE DISTRICT, CITY OF LIVE OAK, AND UNIVERSAL CITY FOR REUSE WATER FROM THE SALATRILLO WASTEWATER TREATMENT SYSTEM

Presenter

Melissa Bryant

Estimated Presentation Time: 20 minutes

The Alamo Community College District, the City of Live Oak, and Universal City are interested in obtaining reuse water from the Salatrillo wastewater treatment system. The City of Converse is also in attendance at discussions but is pursuing development of a separate reuse system at this time. The River Authority has been in discussions with these three entities to determine their reuse water needs. The projected annual reuse water usage for these entities is 230 acre-feet of water, almost exclusively for irrigation purposes. Based upon the projected water needs, the River Authority developed a preliminary cost estimate of \$4,345,689 to construct this project.

The project estimate includes funding for River Authority staff to provide project management, engineering, surveying and real estate services in design and construction administration of the project. The River Authority proposes to issue contract revenue bonds to fund the project and enter into Interlocal Agreements with the three entities for repayment of this investment. The Interlocal Agreements will also address payment of all system-related operating, maintenance and capital replacement expenses.

Alamo Community College District staff will recommend approval of this project to their board in December. Universal City and City of Live Oak are currently in the process of discussing their involvement in the project with their city managers and city council members.

This project will advance SARA's mission of being better environmental stewards by promoting water conservation in our Salatrillo service area.

Recommendation

Motion indicating Operations Committee support for presenting to the San Antonio River Authority Board a recommendation to proceed with the Salatrillo Reuse Project and authorize the General Manager to negotiate the necessary Interlocal Agreements.

Discussion

Vote

Date: 11/02/2009

SAWS Permanent/Temporary Easement

Submitted By: Hector Villanueva, Technical Services **Division:** Technical Services

Submitted For: Claude Harding **Department:** Real Estate

Information

CAPTION

PRESENTATION, DISCUSSION AND APPROPRIATE ACTION REGARDING A RESOLUTION AUTHORIZING THE GENERAL MANAGER TO EXECUTE A PERMANENT WATER EASEMENT AND TEMPORARY CONSTRUCTION EASEMENT BETWEEN THE SAN ANTONIO RIVER AUTHORITY AND THE SAN ANTONIO WATER SYSTEM FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF A WATER LINE WITHIN SAN ANTONIO RIVER RIGHT-OF-WAY AND TO BE LOCATED UNDER THE MISSION ROAD BRIDGE, BEXAR COUNTY, TEXAS

Presenter

Claude Harding and Hector Villanueva

Estimated Presentation Time: 10 minutes

San Antonio Water System (SAWS) has authorized the construction of a water line to be located within San Antonio River right-of-way and to be located under the Mission Road Bridge. The proposed water line installation is being performed in conjunction with the SARIP Mission Reach Project and consists of 125 linear feet of water line within SARA right-of-way. Consequently, the San Antonio River Authority has received a request from SAWS for both a Permanent Easement and a Temporary Construction Easement to accommodate the subject water line installation.

Recommendation

Motion indicating Operations Committee support for staff to present to the San Antonio River Authority Board of Directors a resolution authorizing the General Manager to execute both a permanent easement and a temporary construction easement between the San Antonio River Authority and the San Antonio Water System for the construction, operation and maintenance of a water line within San Antonio River right-of-way to be located under the Mission Road Bridge, Bexar County, Texas.

Discussion

Vote

Date: 11/02/2009

Implementation Plan for the Lower San Antonio River

Submitted By: Steve Lusk, Technical Services

Division: Technical Services

Department: Environmental Sciences

Information

CAPTION

BRIEFING REGARDING A POTENTIAL IMPLEMENTATION PLAN IDENTIFYING BEST MANAGEMENT PRACTICES TO ADDRESS E. COLI IN THE LOWER SAN ANTONIO RIVER

Presenter

Steve Lusk

Estimated Presentation Time: 10 minutes

The Texas Commission on Environmental Quality (TCEQ) has contacted SARA to see if we would be interested in contracting as the local entity to take the lead on an Implementation Project for the Lower San Antonio River. The Implementation Project would identify the best management practices to resolve pollutant issues, in this case bacteria, specifically E. coli.

The project would require an involved public input process and additional monitoring to determine the pollutant sources. SARA staff would assist with both processes under the proposed concept as discussed by TCEQ staff. The scope and cost of the project are yet to be determined.

Discussion

Date: 11/02/2009

Bio-West Amendment No. 7

Submitted By: Rebecca Reeves, Technical Services

Division: Technical Services

Submitted For: Rebecca Reeves

Department: Environmental Sciences

Information

CAPTION

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

CONTRACT AMENDMENT BETWEEN THE SAN ANTONIO RIVER AUTHORITY AND BIO-WEST INC. FOR PROFESSIONAL SERVICES FOR THE LOWER SAN ANTONIO INSTREAM FLOWS STUDY, DESIGN AND IMPLEMENTATION PROJECT

Presenter

Steve Graham and Rebecca Reeves

Estimated Presentation Time: 5 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:

Amendment No. 7 of the Bio-West Contract.

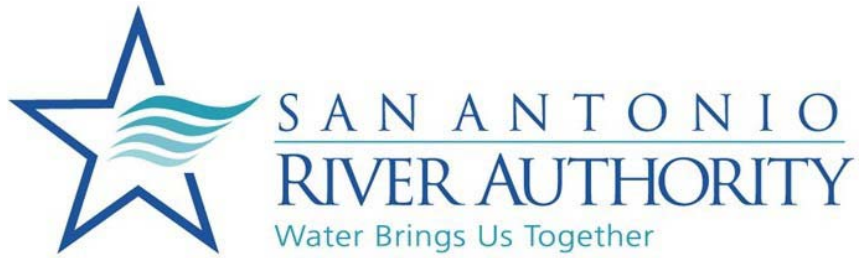
Amendment No. 5 of the contract with Bio-West Inc. authorized a total of \$400,000 dollars to be spent in the 2008/2009 fiscal year. Amendment 5 also acknowledged that a future amendment would be necessary to authorize expenditures for the full amount in the scope of work. Amendment No.6 was for additional modeling work that TCEQ contracted with SARA to complete.

Amendment No. 7 is to authorize the balance of \$555,113.86 to complete the Instream Flows Study, Design and Implementation project. The scope of work has been modified to include changes recommended by the stakeholders and the partnering state agencies. The SARA 2009/10 budget for this project is \$555,115.

Discussion

Attachments

Link: [Amendment7-New](#)



AMENDMENT to PROFESSIONAL SERVICES AGREEMENT
For
Texas Instream Flows Study Design and Implementation
October 13, 2009

Date: September 22, 2009

STATE OF TEXAS §
 §
COUNTY OF BEXAR §

1. SUMMARY

AMENDMENT NO. 7 to the PROFESSIONAL SERVICES AGREEMENT FOR Instream Flow Planning Project between the SAN ANTONIO RIVER AUTHORITY and BIO-West, Inc. dated July 1, 2006 was entered into and executed effective date March 14, 2007, by and between the SAN ANTONIO RIVER AUTHORITY, a political subdivision of the State of Texas domiciled in Bexar County, Texas, hereinafter called the "AUTHORITY," and BIO-West, Inc. hereinafter called "CONSULTANT."

WHEREAS, the AGREEMENT between the parties dated July 1, 2006, provides that it may be amended only by written instrument signed by both parties; and

WHEREAS, it has become necessary to amend said AGREEMENT as hereinafter set forth; and

NOW, THEREFORE, the parties have mutually agreed to amend the Professional Services Agreement dated July 1, 2006 as follows:

AMENDMENT

This amendment authorizes expenditures of additional funds up to \$555,113.86 to complete the scope of work listed below.

"Attachment A" – Description of Services is hereby amended to include Attachment E - Scope of Work – September 2009

"Attachment B" – Payment of Terms is hereby amended to include Attachment F - Table 3. Estimated costs per Task for the lower San Antonio River and lower Cibolo Creek Instream Flow Study

Except as modified herein, the AGREEMENT continues in full force and effect as originally written.

SAN ANTONIO RIVER

AUTHORITY

Date: _____

By: _____
SUZANNE B. SCOTT
GENERAL MANAGER

ATTEST:

STEPHEN T. GRAHAM, P.E.
ASSISTANT SECRETARY

Date: _____

By: _____
EDMUND L. OBORNY, JR.
PRINCIPAL

Scope of Work – September 2009

2. Overview

The San Antonio River basin is located in portions of 14 counties in south, central Texas and supports a diverse ecological community that relies on the quality, quantity, and timing of water moving through the system. The San Antonio River basin (particularly Bexar County) has undergone rapid transformation over the past several decades due to development. Historically, the majority of the lower San Antonio River base flow was from area springs, but over the past several decades the river has experienced an evolution from a system driven predominantly by springflow to a system highly influenced by year-round wastewater treatment plant discharges, intermittent diversions, and a mix of various urban and rural land uses. The lower San Antonio River hydrology continues to be variable with the seasons, driven by precipitation patterns, supported by springflow, and augmented by treated municipal effluent that originates primarily as groundwater from the Edwards Aquifer.

The increased use of groundwater to sustain development has resulted in increasing base flows in the San Antonio River over this rapid development period. This trend may continue if increased population growth is supported by additional groundwater usage or out of basin surface water importation. However, population growth often corresponds with heavier demands on water resources within the basin, resulting in potentially lower river flows should management strategies such as reuse be employed. Either way, there is the potential to affect resident aquatic resources in the lower San Antonio River which provides the rationale behind the San Antonio River Authorities' (SARA) Instream Flow Planning Project. An initial component of that project was a preliminary instream flow assessment to assess low-flow needs to support aquatic resources in the lower San Antonio River. The data collected and analyzed from that initial effort resulted in preliminary low-flow guidelines for the lower San Antonio River aimed at providing SARA with an indication of flows (from one component of the flow regime) necessary to protect the aquatic resources of the river (BIO-WEST 2008). The preliminary instream flow assessment was purposely conducted to allow collected information to fold into SARA's full-scale instream flow study. The focus of this document is the Scope of Work for the full-scale instream flow study for the lower San Antonio River and lower Cibolo Creek. The study objective and specific questions to be addressed are provided below.

Study Objective

- Characterize the flow-habitat and flow-ecological relationships within the lower San Antonio River system (lower San Antonio River and lower Cibolo Creek) and its riverine ecosystem from just downstream of San Antonio to the confluence with the Guadalupe River to provide a means of assessing biological impacts/benefits of various flow regimes. A comprehensive ecologically based tool will be generated from existing studies and field-gathered data that will provide prediction capabilities necessary to evaluate the full range of flows from low, to moderate, to

high on ecological components of the lower San Antonio River system throughout the annual hydrologic cycle.

Specific questions to be addressed include the following:

- What is the impact of altering instream flows on native aquatic biodiversity and potential special aquatic sites?
- What is the impact of altering instream flows on channel maintenance and sediment transport characteristics?
- What is the impact of altering instream flows on riparian vegetation?
- What is the impact of altering instream flows on recreational use?

The BIO-WEST project team will conduct the full-scale instream flow study for the lower San Antonio River system in conjunction with SARA staff and interaction with the Texas Instream Flow Program (TIFP). The following Statement of Work covers the full-scale instream flow study in its entirety which encompasses approximately a 2.5 year window depending on time necessary for review and comment. A proposed schedule and cost estimate are included in sections 4 and 5, respectively.

Preliminary Assessment Accomplishments

A bullet list of preliminary assessment (BIO-WEST 2008) completed activities is presented below:

- Conducted literature review,
- Conducted reconnaissance activities to determine study site selection for preliminary assessment,
- Conducted intensive field data collection activities and data reduction and analysis for Falls City and Goliad study sites,
- Prepared and submitted final report entitled, "Preliminary Instream Flow Assessment for the Lower San Antonio River (Interim Subsistence and Base-Dry Instream Flow Guidelines Development)",
- Presented results of Preliminary Assessment and proposed full Instream Flow Study Draft Scope of Work and schedule to SARA management, and
- Presented results of Preliminary Assessment and proposed full Instream Flow Study Draft Scope of Work and schedule to the TIFP.

Reconnaissance and Study Design Accomplishments

A bullet list of activities conducted from October 2008 through February 2009 is presented below:

- **Conducted Study Design, Meetings, Activities, Coordination**
 - Participated in Stakeholder Workshop (October 21, 2008)
 - Follow-up coordination meeting with TIFP (November 20, 2008)

Attachment E

- Participate in Stakeholder Workshop (December 9, 2008)
- Follow-up coordination meeting with TIFP (December 19, 2008)
- Intensive Site Selection workshop with TIFP (January 23, 2009)
- Study Design Development meeting with TIFP (February 11, 2009)
- **Data collection and compilation to assist Intensive Site Selection**
 - Data acquisition and compilation activities to generate GIS data layers that can be used delineate segments and reaches along the lower San Antonio River and lower Cibolo Creek, and select representative intensive sites.
 - Conducted a reconnaissance flight of the river at a representative base flow in February 2009.
 - Aerial photography was evaluated along with reconnaissance video to create reach-scale mesohabitat maps.
- **Water Quality Model(s) existing data compilation**
 - Data acquisition and compilation was conducted to fully evaluate the extent of SARA's water quality model(s) for the lower San Antonio River and lower Cibolo Creek.
- **Study Design Development**
 - Coordination with SARA and TIFP was conducted and a Draft Study Design Document was prepared for the Instream Flows Study.

3. Work Breakdown Structure

The major work elements (Tasks) are presented in Table 1.

TABLE 1. WORK BREAKDOWN STRUCTURE		
TASK 1		PROJECT MANAGEMENT / MEETINGS
Subtasks	1.1	Project Management
	1.2	Meetings (SARA and TIFP)
TASK 2		PHYSICAL DATA COLLECTION
Subtasks	2.1	Benchmarks, Bathymetry
	2.2	Hydrodynamic Model Calibration
	2.3	Substrate Mapping
	2.4	Sediment Transport
TASK 3		BIOLOGICAL DATA COLLECTION
Subtasks	3.1	Habitat Mapping
	3.2	Fish Sampling: Suitability Criteria Development
	3.3	Fish Sampling: Biological Model Verification
	3.4	Riparian Assessment
TASK 4		MODEL DEVELOPMENT AND RESULTS
Subtasks	4.1	Hydrodynamic Models Development
	4.2	Habitat and Recreation Models Development
	4.3	Water Quality Analysis
TASK 5		DATA ANALYSES AND REPORTING
Subtasks	5.1	Data Reduction and Analysis
	5.2	Reporting

Key Assumptions: The key assumptions for the lower San Antonio River instream flow study are presented below by task. The list of key assumptions is not meant to be exhaustive and it is likely that other assumptions may need to be made through the life of the project as the completion of tasks warrant their development.

3. Statement of Work

Task 1: Project Management / Meetings

Subtask 1.1 – Project Management

Subtask 1.2 – Meetings (SARA and TIFP)

Description of Work: Project management, contracting, task coordination, and internal and external communication are included in this category. Communication of progress with SARA and the TIFP is extremely important. It is anticipated quarterly meetings will be held with SARA. In addition to these face-to-face meetings, the BIO-WEST project team anticipates frequent communication via phone or email with SARA.

Communication with the TIFP will also be a vital component in the success of the lower San Antonio River instream flow study. The BIO-WEST project team will prepare for and participate in bi-monthly meetings with the TIFP.

Key Assumptions:

- *Quarterly meetings with SARA.*
- *Bi-monthly meetings with TIFP.*

Deliverables: Monthly Progress Letter Reports with invoices

Task 2 – Physical Data Collection

Subtask 2.1 – Benchmarks, Bathymetry

Description of Work: At each of the five intensive study sites, complete channel and near channel floodplain Digital Terrain Models (DTMs) will be created using a combination of survey-grade GPS equipment, conventional surveying equipment, and auto tracking GPS system) coupled with hydroacoustic depth/velocity sounding data. Survey data will be reviewed for completeness (missing data, holes in the topography, etc.) on a daily basis using ArcView software, and supplementary topographic surveying will be conducted to ensure complete coverage of each intensive site. Where water depths at low base flows preclude conventional surveying of channel topography, a coupled survey grade GPS Total Station GPS (real time kinematic) and scientific grade echo sounder will be used to collect channel bottom topography. These data will be collected at a relatively high flow to maximize the amount of topography that can be generated with the sonar system. The data will be merged with other topographic data from conventional surveying to create a DTM of the channel. The GPS will have centimeter level accuracy and the depth accuracy of the sonar is approximately 7 cm.

Key Assumptions:

- *Weather conditions will permit all topography data collection prior to summer 2010.*

Internal Deliverable: Topography necessary for development of DTM.

Subtask 2.2 – Hydrodynamic Model Calibration

Description of Work: Calibration and verification are defined as the process whereby a model is calibrated (i.e., input parameters are tuned to maximize measures of model performance) against some of the data and the model is then verified against the remaining data by holding these tuned parameters at the calibrated values. Calibration data for hydrodynamics modeling consists of generating stage discharge relationships at the top and bottom of each intensive site and measuring water surface elevations throughout the site at a minimum of three different discharges. Detailed water surface elevations will be measured with the survey grade GPS (centimeter accuracy) or conventional surveying equipment at a minimum of three flows--high, medium, and low flow. Water surface elevations (WSE) will be surveyed in enough detail to completely describe the edge of water and water surface elevations throughout the intensive site. During data collection, a temporary staff gauge or pressure transducer will be installed at the downstream end of the study site to document any changes in stage. Velocity data to validate the accuracy of the two-dimensional hydrodynamics model results will consist of measuring the length and width of any large recirculation zones and collection of acoustic doppler profiler data or conventional mean column velocity and direction measurements at high, low, and medium flow.

Key Assumptions:

- *All three flow ranges will occur during 2009 to 2010 to provide the range of flows necessary for hydrodynamic model calibration. It is assumed that the higher flows will need to be sampled following natural events.*

Internal Deliverable: WSE and velocity calibration data for development of hydrodynamic model.

Subtask 2.3 – Substrate Mapping

Description of Work: Substrate classifications throughout the intensive sites will be delineated with sub-meter accuracy GPS in the field or in areas of complexity, surveyed in with conventional surveying equipment. Mapping will be completed at low flow when the entire channel is visible. Substrate will be delineated into visibly homogeneous substrate types based on dominant and subdominant particle sizes. In areas too deep for visual characterization, sampling with a pole ekman dredge (or equivalent sediment sampler) or sounding will be used to characterize the substrate. Classification will be based on a modified Wentworth scale used by Texas Parks and Wildlife Department (TPWD).

Disturbed or rip-rapped areas will be placed into the size class that most closely corresponded to the size of the rip-rap or disturbed soil. Instream cover will also be mapped and include aquatic macrophytes and woody debris. Substrate maps will be digitized into a GIS layer using ArcView software. The results will be integrated with the DTM results (or computational mesh) for several purposes (i.e., to assign roughness, substrate, and cover attributes to each computational mesh point).

Internal Deliverable: Data inputs for the development of hydrodynamic models and selection of habitat suitability sampling locations.

Subtask 2.4 – Sediment Transport

Description of Work: The sediment transport evaluation will focus on coordinating with, reviewing, and supporting to the degree practicable, the work being conducted by Dr. Judy Haschenburger of the University of Texas – San Antonio. Dr. Haschenburger is conducting a geomorphic assessment under a separate contact with the Texas Water Development Board (TWDB).

Key Assumptions:

- *Dr. Haschenburger will complete and submit the project deliverables to TWDB by Fall 2010.*

Internal Deliverable: Data analysis to incorporate the UTSA study results into supporting instream flow recommendations.

Task 3 – Biological Data Collection

Subtask 3.1 – Habitat Mapping

Description of Work: For each study site where habitat modeling will be conducted, GPS units will be used to delineate mesohabitats according to the following characteristics:

- Pool - flat surface, slow current; usually relatively deep
- Backwater - flat surface, very slow or no current
- Run - low slope, smooth, unbroken surface
- Riffle - moderate slope, broken surface
- Rapid - moderate to high slope, very turbulent (e.g. boulder field)
- Chute - very high velocities in confined channel

If the mesohabitat can be further discriminated, it will be assigned a qualifier for relative current speed and depth using 'fast' or 'slow' for current velocity and 'shallow' or 'deep' for depth. Notes on location and density of woody debris and other instream cover, unique habitat features (e.g., a unique outcrop) and substrate composition will be taken. Measurements of current velocity and depth will be taken to facilitate development of objective criteria to define mesohabitat types. These mesohabitat surveys will be performed at three flow conditions determined to be consistent with fish sampling for suitability criteria development. Standardized field guides and sampling protocols will be provided to field crews in order to maximize the accuracy and repeatability of habitat data collection.

Key Assumptions:

- *Fish sampling for suitability criteria development will take place during similar flows to when the habitat mapping was conducted.*

Internal Deliverable: Internal use for the selection of sampling sites for suitability criteria fish sampling.

Subtask 3.2 – Fish Sampling: Suitability Criteria Development

Description of Work: For the purpose of supplementing existing biological data on the lower San Antonio River and lower Cibolo Creek, fish sampling is proposed during a minimum of three different flow rates for the development of suitability criteria for resident species. To maximize cost efficiency, this will take place concurrently with the collection of

detailed physical data discussed in Task 2. Sampling will be performed by seining, backpack electrofishing, boat/barge electrofishing, or some combination of the three. Direct observations of fish with positive identification but not collected will also be noted. During the biological sampling, several habitat parameters will also be measured per individual sampled cell. At a minimum, these will include velocity, depth, substrate, and cover (aquatic macrophytes and woody debris).

The fish sampling data will be reduced and analyzed. The data will then be combined with existing information to the degree practicable and evaluation of functional habitat groups using all information will be conducted. The range of suitable habitat conditions associated with each of these functional habitat groups will then be input into the habitat model to predict changes in available habitat for each respective group.

Key Assumptions:

- *Three flow-related sampling events coupled with existing biological data will be sufficient for suitability criteria development.*

Internal Deliverable: Internal use for development of Habitat Suitability Criteria.

Subtask 3.3 – Fish Sampling: Biological Model Verification

Description of Work: For the purpose validating the habitat model for each intensive site, additional biological sampling will be conducted at three intensive sites during low-flow and moderate-flow conditions (Goliad and Falls City intensive study sites are not proposed for biological validation sampling). Rather, for added cost efficiency it is proposed that the fisheries data collected during the preliminary assessment (BIO-WEST 2008) at these sites be used for habitat model verification. To maximize cost efficiency, sampling will take place concurrently with the physical measurements described in Task 2, when feasible. Locations of all fish samples will be registered accurately (+/- 0.5 meters) onto the intensive sites using a combination of surveying, GPS, and/or marking on large aerial prints.

Key Assumptions:

- *Low and moderate flows will occur in 2009 to 2010 to provide the range of flows necessary for biological model validation.*

Internal Deliverable: Internal use for habitat model verification.

Subtask 3.4 – Riparian Assessment

Description of Work: Riparian vegetation classifications for subsets of the intensive study sites will be delineated in the field with GPS equipment or on prints of the intensive site digital aerial imagery. Mapping will be completed in the Spring and Fall to bracket one full growing season. Riparian vegetation will be delineated into the following broad categories established to distinguish vegetation types based on hydraulic roughness characteristics: grass/herbaceous, scrub-shrub, and mature tree. Riparian maps will be digitized into a GIS layer using ArcView software.

In addition, BIO-WEST will coordinate with the riparian analysis that Dr. Duke of Baylor University will be conducting on the lower San Antonio River as part of a separate TWDB contract.

Internal Deliverable: Data inputs for the riparian corridor analysis.

Task 4 – Model Development and Results

Subtask 4.1 – Hydrodynamic Models Development

Description of Work: The complete channel and floodplain DTM will be generated at each intensive site by combining the sonar and survey data. The DTM for each intensive site will be used in the development of the hydrodynamic model and subsequent habitat model. In concordance with the TIFP, a two-dimensional (2D) hydrodynamic model will be developed for each intensive site. Calibration is defined as the process by which certain parameters (i.e. roughness and viscosity) are fine tuned to maximize measures (i.e. velocity and depth) of model performance. Validation is the comparison of known data versus the calibrated model results. Each time the project team collects stage-discharge data for the development of rating curves (each intensive site at a minimum of 3 flows), approximately 50 additional depth/velocity point measurements will be collected. Elevation contour maps and a random point generator will be used to produce a quasi-random set of calibration/validation point locations. The project team will then use half of the velocity and depth data to calibrate the roughness and viscosity parameters in the 2D model and the other half to validate the model results and report uncertainty.

The 2D hydrodynamic model will be calibrated to at least three measured water surfaces (high, medium, and low flow) by adjusting substrate roughness and, to a lesser degree, the eddy viscosity parameters. To adjust substrate roughness, substrate maps at each intensive site will include an estimated hydraulic roughness height based on the size of the largest particle in each substrate category. During the calibration phase of the hydrodynamics modeling, the roughness heights across all substrate types will be increased or decreased by a constant percentage until the modeled water surface matches the measured water surface. This will first be done at the moderate calibration flow. A check that the calibrated roughness performs accurately at the high and low calibration flows will be performed. If necessary an equivalent roughness height modifier regression will be used to scale roughness height over the range of modeled flows. A similar procedure will be used to calibrate the viscosity parameters, which are used by the model to calculate viscosity at each node based upon local velocity. Since the three viscosity parameters are assigned as constants for all areas of the model, a modifier regression may be used to scale the parameters over the range of flows. When roughness height and viscosity adjustments are obtained that generate accurate modeled water surface elevations for all three flows, the hydrodynamics model will be assumed to be calibrated. All subsequent hydrodynamics modeling of the various flows for habitat modeling will be completed using calibrated channel roughness heights and viscosity parameter adjustments. Ten to 15 flows ranging from 10 to 5,000 cfs will likely be modeled at each intensive site. This flow range covers the majority of median monthly flows in the historical range including temporary pulse flow events, but not including flood flow conditions. This focus of this range is on in-channel aquatic habitat conditions. The flood flow analysis will be conducted in the sediment transport analysis.

Perform Sensitivity Analysis

Uncertainty in environmental models lies within characterizing the system. A riverine model uses generalized parameters to describe and simulate the physical characteristics of the river. These generalized parameters have uncertainty bounds associated with them, which leads to model uncertainty. Calibration of a hydrodynamic model aids in reducing, but not totally eliminating, model uncertainty. To calibrate a model, parameters are adjusted within their uncertainty ranges to ensure that simulation results adequately match data records as discussed above. Once calibrated, the project team will investigate the sensitivity of the hydrodynamic model results to changes in parameters. If the model is found to be highly sensitive to a parameter, efforts can be made to reduce the parameter uncertainty through further data analysis and/or additional validation data acquisition.

Key Assumptions:

- *Hydrodynamic models calibrated by summer 2010.*
- *Final Models delivered in 2011.*

Deliverable: Final 2D hydrodynamic models for each intensive site.

Subtask 4.2 – Habitat and Recreation Models Development

Description of Work: The habitat modeling for each species or guild and recreational activity will be similar to a typical USFWS Physical Habitat Simulation (PHABSIM) analysis. Total weighted usable area (WUA) versus discharge will be computed between 10 and 5,000 cfs. Total WUA is simply the summation of the area resulting from multiplying the combined suitability for a node with the area the node represents. For an assessment of available fish species or guild habitat, a typical PHABSIM type habitat analysis will be run where the suitability of a cell is based on the minimum suitability resulting from daily flow fluctuations. Additionally, the biological validation fisheries data collected will be used during habitat modeling to validate or modify the habitat modeling procedures.

The functional habitat groups developed in the early stages of the study will be used for the overall aquatic community modeling. Individual habitat suitability curves for adult, spawning, juvenile, and larval species may be constructed based on site specific needs. Recreational activities including swimming, wade fishing, boating, kayaking, and canoeing will be modeled using existing suitability criteria for these activities. Recreation modeling will consist of using the final 2D hydraulic models at each intensive site coupled with suitability criteria for recreational activities (swimming, wade fishing, boating, kayaking, and canoeing). Recreational suitability criteria will be compiled from existing literature including peer reviewed articles, technical reports, and published books.

Key Assumptions:

- *Recreational suitability criteria established in the literature is sufficient to address recreational activities for the lower San Antonio River and lower Cibolo Creek.*

Deliverable: Final habitat and recreation model results to be used in the development of instream flow guidelines for the lower San Antonio River and lower Cibolo Creek.

Subtask 4.3 – Water Quality Analysis

Description of Work: Water quality issues were discussed in the Preliminary Assessment (BIO-WEST 2008) and further evaluated during winter 2009. Qual-TX water quality models do exist for the lower San Antonio River and lower Cibolo Creek. However, it is anticipated updates and revisions to the existing models will be necessary to analyze impacts relative to various flow regimes. Refinements of these models will require data accumulation and manipulation. Data needs include but are not limited to current: (1) water balance (volume and location of inflows, discharges and diversions), (2) loading from tributaries and contributing watershed, (3) treatment plant discharges (both volume and loading), (3) literature values for modeling parameters and/or (4) collection of additional field data (travel time, diurnal variations, etc.). Interaction with SARA and other entities will be necessary, particularly as related to understanding the lower San Antonio River and development of modeling scenarios. Calibration of model parameters will be conducted, as will model sensitivity analyses. The calibrated model will be validated using a set of known conditions if sufficient data is available. Once calibrated and validated, the model will be a useful tool for understanding and estimating water quality impacts for different instream flow scenarios. The model will also be useful for understanding potential future conditions.

In addition, the Texas Commission on Environmental Quality (TCEQ) is sponsoring a water quality study focused on evaluating water quality modeling approaches with a specific test case in the lower San Antonio River. BIO-WEST will coordinate with TCEQ and incorporate those study results into the instream flow recommendations to the degree practicable.

Key Assumptions:

- *TCEQ sponsored water quality study pertaining to the LSAR will be completed by Fall 2010.*

Internal Deliverable: Updated Qual-TX water quality models or new models determined by and developed in the TCEQ sponsored evaluation for the main stem of the lower San Antonio River and lower Cibolo Creek.

Task 5 – Data Analyses and Reporting

Subtask 5.1 – Data Reduction and Analysis

Description of Work: The project team will upload all data to the ftp site being hosted by SARA. The team will also enter positional data into a HIS database. SARA will host the webservice that the internal team can use to gain access to the positional information. Using the HIS database, one will be able to easily access what work has been completed, where it was collected, and who collected it. A reference will also be included to the location where the actual data values are stored on the ftp site. Actual data values for each parameter can be added to the HIS at a later date should the TIFP develop a statewide protocol.

The BIO-WEST project team will reduce and analyze all physical and biological data collected as per the schedule of activities. Hydraulic and habitat modeling, sediment transport analysis, and water quality modeling will be used to support the development of instream flow guidelines for the lower San Antonio River and lower Cibolo Creek.

Deliverable: Processed field data in digital format for incorporation into the data analysis phase. A comprehensive set of inflow guidelines for the lower San Antonio River and lower Cibolo Creek.

Subtask 5.2 – Reporting

Description of Work: The BIO-WEST project team will present a technical studies update and status summary to SARA management at the end of each SARA fiscal year. The BIO-WEST project team will submit a data and activities report at the end of SARA fiscal year 2010 and 2011. Along with that report will be a presentation to SARA management that highlights the data collected during that period and the progress of the instream flow study. The project team will prepare a technical report detailing the activities, methodologies, results, discussion, and conclusions of the lower San Antonio River instream flow study. The focus of the draft and final technical report will be on the instream flow guidelines determined for the lower San Antonio River and lower Cibolo Creek. Following the submittal of each report, a presentation to SARA management will be conducted, if requested.

Deliverable: Annual report and presentation in June 2010 and 2011. Draft and Final technical reports with subsequent presentations to SARA management.

4. Schedule

The proposed schedule for the lower San Antonio River and lower Cibolo Creek instream flow study is presented in Table 2. The schedule includes an April 2009 start date and completion in calendar year 2011 with the submittal of the final Instream Flow Guidelines report and presentation. Hazardous weather and flow conditions could potentially shift the field sampling schedule in either direction, thus potentially affecting the overall project schedule. Review time required by the TIFP and stakeholders may also cause shifts in the proposed schedule.

5. Fee Estimate

A cost estimate by task is presented in Table 3. The estimated total fee for the project is \$955,114 based on the assumption of five intensive study sites, the additional assumptions outlined throughout this scope of work, and following the schedule presented in Table 2. However, it is difficult to project exact costs for multi-year studies and unforeseen circumstances (ranging from stakeholder requests to Mother Nature) can occur in this type of project. Therefore, this initial estimate may vary up to 10% or so. Should less intensive sites be deemed necessary to characterize the system and/or TIFP support be significantly more than anticipated, costs would decrease. Costs should not increase unless major scope modifications are made. It is recommended that when these types of circumstances present themselves, modifications to the budget and schedule be considered by SARA on an individual case basis.

6. References

BIO-WEST, Inc. 2008. Preliminary Instream Flow Assessment for the Lower San Antonio River (Interim Subsistence and Base-Dry Instream Flow Guidelines Development) Prepared for the San Antonio River Authority. September 2008.

Attachment E

Table 2. Proposed Schedule for the lower San Antonio River and lower Cibolo Creek Instream Flow Study

PROPOSED SCHEDULE			2009			2010				2011			
			Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
TASK 1	PROJECT MANAGEMENT / MEETINGS												
Subtasks	1.1	Contract / Project Management											
	1.2	Meetings (SARA and TIFP)											
TASK 2	PHYSICAL DATA COLLECTION												
Subtasks	2.1	Benchmarks, Bathymetry											
	2.2	Hydrodynamic Model Calibration											
	2.3	Substrate Mapping											
	2.4	Sediment Transport											
TASK 3	BIOLOGICAL DATA COLLECTION												
Subtasks	3.1	Habitat Mapping											
	3.2	Fish Sampling - Suitability Criteria Development											
	3.3	Fish Sampling - Biological Model Verification											
	3.4	Riparian Assessment											
TASK 4	MODEL DEVELOPMENT AND RESULTS												
Subtasks	4.1	Hydrodynamic Models Development											
	4.2	Habitat and Recreation Models											
	4.3	Water Quality Analysis											
TASK 5	DATA ANALYSES AND REPORTING												
Subtasks	5.1	Data Reduction and Analysis											
	5.2	Reporting											

Attachment F

Table 3. Estimated costs per Task for the lower San Antonio River and lower Cibolo Creek Instream Flow Study

LABOR:

Position	Rate	TASK 1 - Project Management / Meetings		TASK 2 - Physical Data Collection				TASK 3 - Biological Data Collection				TASK 4 - Model Development			TASK 5 - Data Analyses and Reporting		Total Hours	Cost	
		Project Management	Meetings	Benchmarks, Bathymetry	Hydraulic Model Calibration	Substrate Mapping	Sediment Transport	Habitat Mapping	HSI Fish Collection	IBI Fish Collection	Riparian Assessment	Hydraulic Model	Habitat Model	Water Quality Model	Data Analysis	Reporting			
Project Manager	119.76	128	192		24		64			100			36	160	64	224	160	1,152	\$ 137,963.52
Senior Ecologist	95.20		24				36							204		184	120	588	\$ 55,977.60
Riparian Biologist	79.84		24	220	150	100	64			240		200				160	80	1,238	\$ 98,841.92
Fisheries Biologist	75.24		48							300	100			168		170	120	906	\$ 68,167.44
Fisheries Biologist	75.24		24	100	150			400		300						70	36	1,080	\$ 81,259.20
Fisheries Technician	64.49			100	150	80				300		200				120		950	\$ 61,265.50
Fisheries Technician	55.28																	0	\$ -
Administrative	49.13	48														64	24	136	\$ 6,681.68
Senior Engineer	140.00	96	128	240	150		64					80	430	180	300	180	120	1,968	\$ 275,520.00
Project Engineer	110.00		48									40	110	90		120	40	448	\$ 49,280.00
Engineering Technician	70.00												280		190	78		548	\$ 38,360.00
Total Labor		272	488	660	624	200	228	400	1,240	100	520		856	802	554	1,370	700	9,014	873,316.86
TRAVEL																			
Hotel and Meals			250	250	5,040	4,200	1,050	6,300	2,100	6,300	500	1,050	150	150	150	150	150		\$ 27,790.00
Mileage (\$.55 per mile)	0.550		1,000	4,000	5,000	2,500	1,500	5,000	2,000	4,000	1,000	1,500	1,000	1,000	1,000	1,000	1,000	32,500	\$ 17,875.00
Total Travel																			\$ 45,665.00
OTHER DIRECT COSTS:																			
Equipment			-		5,000	2,000	500	500	2,750	10,500	600	800	250	250	250				\$ 23,400.00
Supplies		\$ 250	\$ 250	\$ 1,500	\$ 750	\$ 250	\$ 750	\$ 750	\$ 1,500	\$ 125	\$ 500	\$ 250	\$ 250	\$ 250	\$ 187	\$ 445			\$ 8,007.00
Phone / Fax / Copies		\$ 250	\$ 250	\$ 300	\$ 150	\$ 75	\$ 150	\$ 75	\$ 150	\$ 150	\$ 75	\$ 75	\$ 500	\$ 500	\$ 500	\$ 350	\$ 1,250		\$ 4,725.00
Total Other Direct Costs		\$ 500	\$ 500	\$ 6,800	\$ 2,900	\$ 825	\$ 1,400	\$ 3,575	\$ 12,150	\$ 875	\$ 1,375	\$ 1,000	\$ 1,000	\$ 1,000	\$ 537	\$ 1,695			\$ 36,132.00
Total Estimated Cost																		Total	\$ 955,113.86
Subtasks		32,427.52	58,762.16	79,727.80	65,284.74	17,747.20	35,611.60	36,871.00	116,278.60	9,449.00	47,716.00	97,911.36	88,022.72	64,664.64	131,155.16	73,484.36			
TASKS		\$91,189.68			\$198,371.34				\$210,314.60			\$250,598.72			\$204,639.52				

Date: 11/02/2009

Executive Session: Truehart Ranch

Submitted By: Claude Harding, Technical
Services

Division: Technical Services

Department: Real Estate

Information

CAPTION

**EXECUTIVE SESSION PURSUANT TO TEXAS GOVERNMENT CODE SECTION
551.072 FOR DELIBERATION REGARDING THE PURCHASE, EXCHANGE,
LEASE OR VALUE OF REAL PROPERTY TO BE ACQUIRED IN BEXAR
COUNTY, TEXAS, AS PART OF THE SAN ANTONIO RIVER NATURE PARK
SYSTEM**

Presenter

David Ross, Dale Bransford and Claude Harding

Estimated Presentation Time: 15 minutes

Date: 11/02/2009

Truehart Ranch

Submitted By: Claude Harding, Technical Services

Division: Technical Services

Department: Real Estate

Information

CAPTION

PRESENTATION, DISCUSSION AND APPROPRIATE ACTION CONCERNING THE PURCHASE, EXCHANGE, LEASE OR VALUE OF REAL PROPERTY TO BE ACQUIRED IN BEXAR COUNTY, TEXAS, AS PART OF THE SAN ANTONIO RIVER NATURE PARK SYSTEM

Presenter

Dale Bransford and Claude Harding

Estimated Presentation Time: 10 minutes

The San Antonio River Authority owns limited land resources on which to further advance its mission and strategic performance objectives. An opportunity exists to acquire land in south Bexar County at and along the San Antonio River and Blue Wing Road known as Truehart Ranch. The 335-acre property has excellent access, abundant natural resources, over 1.5 mile river frontage, and contains significant historic resources. The property also offers an excellent river access site that is positioned well to connect upriver to Mission Espada and downriver to the Loop 1604 access site.

This proposed acquisition for park purposes is consistent with and promotes the goals of the River Authority's River Basin Plan for Nature-based Park Resources, as well as the River Authority's 2009-2010 goal to enhance community appreciation for the environmental resources of the San Antonio River and its tributaries: promote recreational value of the river.

After a due diligence investigation involving a Phase I Environmental Assessment, the property was void of any environmental concerns that would otherwise compromise or limit the River Authority's intended use of the land. The property is owned by Blue Wing Holdings, LLC, and is currently used for cattle grazing and hunting.

At the October 5, 2009, meeting of the River Authority's Operation Committee, the Committee received a briefing from staff on this proposed acquisition.

Recommendation

Motion indicating Operations Committee support for presentation to the San Antonio River Authority Board a recommendation to negotiate the acquisition of approximately 335 acres owned by Blue Wing Holdings, LLC, located at 14984 Blue Wing Road in south Bexar County, Texas.

Discussion

Vote

Date: 11/02/2009

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Submitted For: Suzanne B. Scott

Department:

23.

Information

CAPTION

STATUS REPORT ON THE SAN ANTONIO RIVER IMPROVEMENTS PROJECT

Presenter

Suzanne B. Scott

Estimated Presentation Time: 10 minutes

Discussion

24.

Information

CAPTION

GENERAL MANAGER'S REPORT CONCERNING THE FOLLOWING:

- **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: 10 minutes

Discussion

25.

Information

CAPTION

ITEMS FOR FUTURE CONSIDERATION

Presenter

Suzanne B. Scott

Estimated Presentation Time: 5 minutes

Discussion

Submitted By: Lupe Moreno, Executive
Offices

Division: Executive Offices

Submitted For: Suzanne B. Scott

Department:

26.

Information

CAPTION

NEXT MEETING DATE

Presenter

Suzanne B. Scott

Estimated Presentation Time: 5 minutes

Unless otherwise decided by the Committee, the next Operations Committee meeting will be Monday, December 7, 2009, at 2:00 p.m.

Discussion

27.

Information

CAPTION

ADJOURN

Presenter

Mr. Ruckman, Committee Chairman
