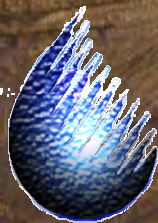


LAS VEGAS WASH CAPITAL IMPROVEMENTS PLAN

**SOUTHERN NEVADA
WATER AUTHORITY
DECEMBER 18, 2003**



Southern Nevada Water Authority

Las Vegas Wash
Capital Improvements Plan
Revised December 2003



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Las Vegas Wash Capital Improvements Plan

1.0 Introduction

1.1 Purpose

The Lower Las Vegas Wash (Wash), in Clark County, Nevada, is the primary urban runoff, wastewater and floodwater outlet from the Las Vegas Valley into Lake Mead and the Colorado River. The Wash is considered a critical component in the many environmental and water resource issues facing Southern Nevada today. This Southern Nevada Water Authority's Las Vegas Wash Capital Improvements Plan (Wash CIP) presents a summary of planned capital expense activities necessary to support long-term enhancement and management of the Wash.

1.2 Background

Since 1975 the Wash has undergone significant erosion and degradation due to increasing flows resulting from expanding upstream urbanization in the Las Vegas Valley. To combat the changes in the Wash, the Las Vegas Wash Coordination Committee (LVWCC), a 28-member interagency group of federal, state, and local agencies and private interests, was formed and has developed a Comprehensive Adaptive Management Plan (CAMP). The SNWA Board of Directors approved the CAMP in April 2000.

Of 44 recommendations, the CAMP identifies erosion control in the Wash as one of the highest recommended priority efforts. To accomplish this goal, a Cooperative Agreement has been developed between the local government agencies considered major stakeholders in the Wash. As described in the Cooperative Agreement, the Southern Nevada Water Authority (SNWA) has been designated by members of the agreement, as the lead agency to coordinate and manage the enhancement of the Wash. Among many assigned tasks, the SNWA is responsible for maintaining this Wash CIP.

The Cooperative Agreement also establishes a Management Advisory Committee (MAC) to provide advise and consultation to SNWA on issues regarding this Wash CIP. Local government agency members of the MAC include:

- City of Las Vegas
- City of Henderson
- City of North Las Vegas
- Clark County
- Clark County Water Reclamation District
- Clark County Regional Flood Control District
- Southern Nevada Water Authority

2.0 Plan Scope

2.1 General Scope

This Wash CIP covers the geographical area of the Las Vegas Wash from the City of Las Vegas Wastewater Treatment Plant to the western boundary of the Lake Mead National Recreational Area. The Wash CIP is intended to describe all presently identified construction and construction support projects supporting the management and enhancement of the Wash. Project elements included in this Wash CIP include:

- Channel bed stabilization;
- Channel bank protection;
- Revegetation; and
- Design studies and comprehensive support programs.

The purpose of channel bed stabilization is to reduce channel bed erosion by slowing stream flow to less erosive conditions while providing a stable platform for vegetation re-establishment. Gradient control weirs or dams are planned for installation to accomplish this purpose.

Channel bank protection installations focus on reducing the ability of Wash flows to erode, undercut, and collapse channel banks. Capital expenditures for bank protection will include installation of rock riprap bank toe armor and the revegetation of stream banks.

Revegetation of the Wash channel bed, banks, and floodplain areas will provide surface erosion protection, aid ecosystem restoration, support water quality goals and meet environmental permitting requirements. Revegetation activities may include wetlands or dry land revegetation, installation of temporary irrigation systems and establishment of vegetation protection measures.

Design studies and comprehensive support programs include activities serving multiple projects or the Wash as a whole. Activities under this element may include installation of haul roads, location of materials storage sites, provision for long term dust control, sediment and hydraulic studies, water quality monitoring, stream gauging, and other supporting capital expense activities which are necessary to support design and construction efforts.

2.2 Facility Information

The following information regarding specific facilities is presented in this Wash CIP:

- General description of each planned facility;
- Location map of proposed facilities;
- Anticipated construction schedules;
- Estimated cost of each proposed facility;
- Proposed funding mechanism(s) for each facility;
- Total cost of the Wash CIP in current and midpoint construction dollars;
- Cash flow forecasts by year; and
- A list of facilities SNWA is responsible for operating and maintaining.

3.0 Organization

General information regarding the background, scope, approval process, projected revenues, anticipated expenditures, prioritization, and funded Project Work Plan are presented in the Wash CIP report. Specific details defining anticipated projects, cost, schedule, prioritization analysis, revenue projection, and other details are included as appendices to this Wash CIP.

All individual projects of a capital expense nature are identified in the Appendix C as Candidate Projects to this CIP. A SNWA project number and a location name uniquely describe each project. Channel bank protection, revegetation, and support infrastructure projects are further identified by location either north (east) of or south (west) of the Wash base flow channel. The appendices provide additional or detailed information utilized in development of the Capital Improvements Plan as follows:

Table 1
Wash CIP List of Appendices

Appendix	Contents
A – 2003-05 Project Work Plan	Planned projects for which funding has been identified. Projects described are a subset of the candidate projects master list.
B – Work Plan Project Descriptions	Detailed descriptions of proposed Work Plan projects
C – Candidate Projects	A listing of all presently identified projects that are a part of the long term management and enhancement plan for the Las Vegas Wash..
D – Construction Program Budget Allocation	Estimated project implementation cost and schedule.
E – Location Map	Grade Control Structures location map.
F – Ranking Criteria Scoring	Prioritization criteria for establishing priority rankings of proposed channel bed stabilization and bank protection projects.
G – Project Prioritization	Prioritization criteria and scoring establishing channel bed stabilization and bank protection order of construction.
H – Sales Tax Received And Distributed	Summary of past local ¼ cent sales tax distributions for water and wastewater programs
I – Sales Tax Revenue Projection	Summary of projected ¼ cent sales tax distributions for water and wastewater programs
J – Inter-account Loan Debt Service	Projected inter-account debt service summary
K- Completed Projects Summary	A listing of completed projects, year completed and capital cost.

4.0 Plan Implementation

4.1 Cooperative Agreement

A Cooperative Agreement (Agreement) pertaining to the long term management and enhancement of the Las Vegas Wash has been developed by the SNWA, Clark County, City of Las Vegas, City of Henderson, City of North Las Vegas, Clark County Sanitation District, and Clark County Regional Flood Control District. The Agreement established roles and responsibilities for the above agencies in managing the Las Vegas Wash. The development, review, and update of this Wash CIP are identified in the Agreement as a responsibility of the SNWA. The Agreement further defines the contents of the Wash CIP as presented herein.

4.2 Annual Plan Review

The SNWA annually reviews, reaffirms, or revises the Wash CIP and the Project Work Plan, as necessary to meet the goals and requirements of the Agreement. In performing annual review, the SNWA consults with the local agency stakeholders to the Wash through the Operations Study Team of the LVWCC and through the MAC.

SNWA's consultation with local agency stakeholders and revisions to the Wash CIP focus upon current changes in priority, planning, design, cost, funding, and /or capital needs associated with the elements of the Wash CIP and Project Work Plan. Revisions to the Wash CIP reflect the elimination of capital items previously installed or revisions proposed by a party to the Agreement and agreed to by the MAC.

Upon SNWA revision and approval by the MAC, the annual Wash CIP update is submitted to the SNWA Board of Directors for review and action.

4.3 Funding Approval

As appropriate, SNWA prepares and submits Wash CIP funding agreements to the MAC for review. Funding agreements prepared and submitted by SNWA may also define the process whereby entities other than the parties to the Agreement may either fund or contribute to the Wash CIP.

Subsequent to the MAC's review of funding agreements, SNWA submits the funding agreements to each of the local governmental agencies comprising the MAC for consideration and possible approval by their respective Governing Boards as a part of the individual Party's overall budgeting process.

5.0 Revenues and Expenditures

5.1 Revenues

5.1.1 Sales Tax Revenues

Local revenues for the construction program are derived from funds provided through receipt of Las Vegas Wash allocation (4%) of a ¼ cent sales tax allocation for funding water and wastewater projects. Revenue allocation of this sales tax is divided between Las Vegas Wash, Rural areas of Clark County, SNWA Water CIP, and Wastewater agencies. Allocations of sales tax revenues received to date and projected future receipts are presented below:

Figure 1
Distribution of Sales Tax Received
April 1999 - June 2003 (in \$1,000's)

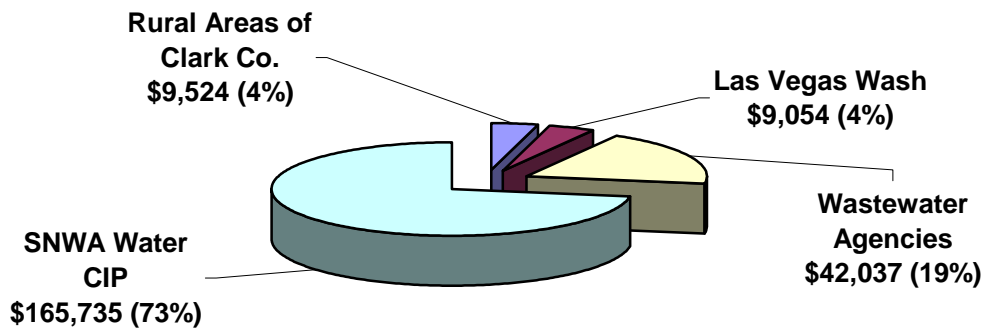
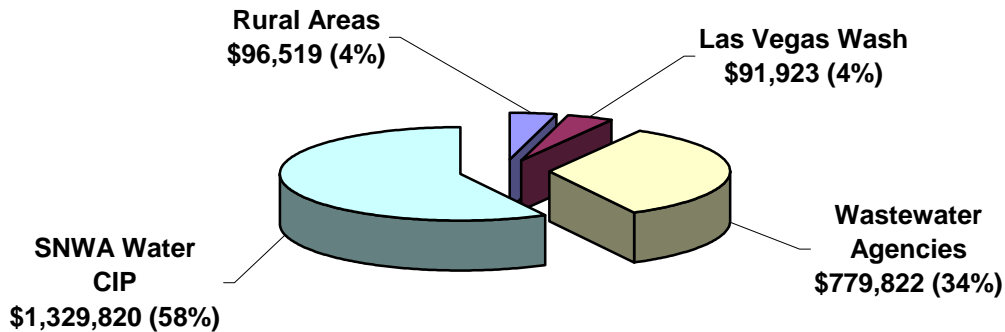


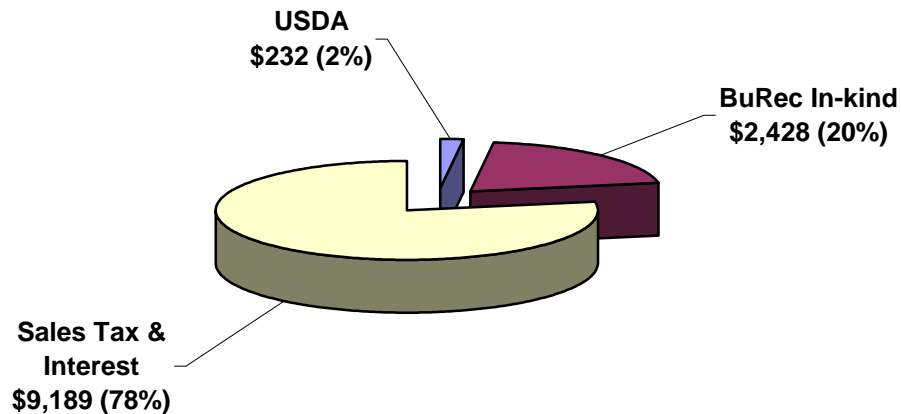
Figure 2
Projected Distribution of \$2.3 Billion Sales Tax
1999 - 2025 (in \$ 1,000's)



5.1.2 Composite Revenues

To date, sales tax and interest revenues received for Las Vegas Wash construction projects have totaled approximately \$9,188,786. In addition to sales tax revenues, the SNWA has received approximately \$231,520 in emergency repair funding from the US Department of Agriculture (USDA), and approximately \$2,427,984 of in-kind construction services support from the US Department of the Interior, Bureau of Reclamation (BuRec). Revenues received to date, totaling approximately \$11,848,290, which have been utilized for capital expenses in the Las Vegas Wash are broken down as follows:

Figure 3
Composite Revenues Received 1999 - 2003
(in \$1,000)

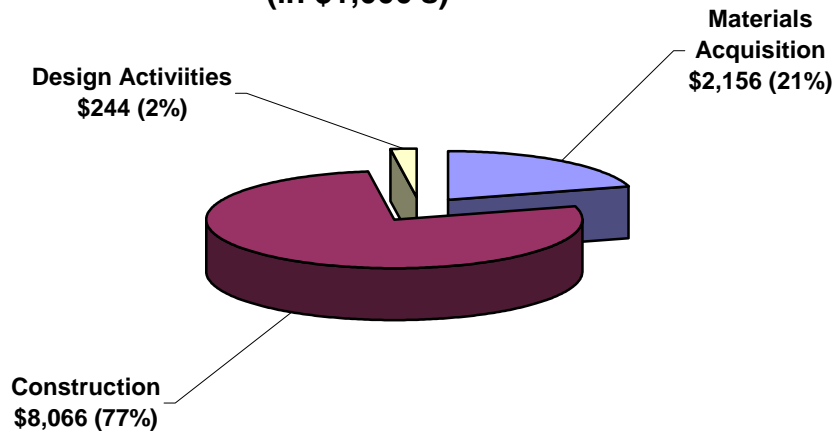


5.2 Expenditures

5.2.1 Expenditures To Date

From July, 1999, through June 2003 the SNWA has expended a total of approximately \$10,466,217 for construction and construction related activities at the Las Vegas Wash. This figure includes approximately \$2,427,984 of in-kind construction services performed by the US Bureau of Reclamation and approximately \$5,638,098 direct construction activities, for a total of \$8,066,082. \$243,700 has been expended for engineering design, site surveying, and geotechnical investigations associated with construction projects in the Las Vegas Wash. SNWA expended approximately \$2,156,435 to acquire, haul and stockpile construction materials. Expenses to date for design, materials and construction are shown below:

Figure 4
SNWA Capital Expenditures 1999-2003
(in \$1,000's)



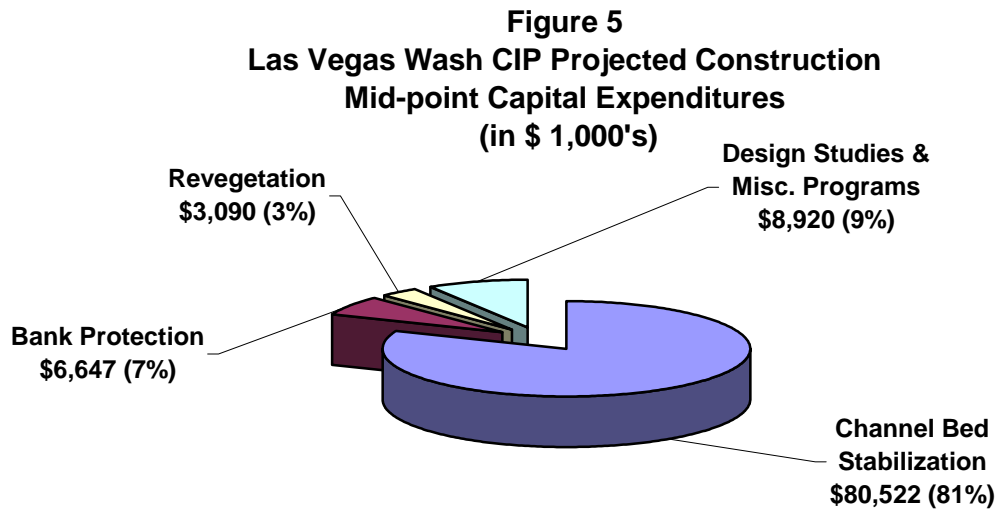
In addition to SNWA's capital expenditures, Clark County has expended approximately \$5.4 million for the design and construction of the Pabco Road Grade Control Structure on the Las Vegas Wash.

5.2.2 Projected Expenditures

Current projections of capital expenditures for the Wash CIP, are detailed in the Candidate Project Master List in the Appendix C. Projected expenditures are shown in both current dollars and projected expenses accelerated to future construction mid-point dollar cost based upon an estimated 4% annual growth rate. Estimated capital expenditures are summarized in the table and chart below.

Table 2
Projected Wash CIP Expenses
(in \$1,000's)

<u>Wash CIP Component</u>	<u>Current Cost</u>	<u>Construction Mid-Point</u>
Channel Bed Stabilization	\$ 71,121	\$ 80,522
Bank Protection	5,452	6,647
Re-vegetation	2,753	3,090
Design Studies & Misc. Programs	<u>8,016</u>	<u>8,920</u>
Total Projected Expenditure:	\$ 87,342	\$ 99,179



5.3 Work Plan Budgets and Expenditures

Project Work Plan budgets are detailed in the Project Work Plan Section of this CIP. Project Work Plan budgets are based upon current estimates of cost, shown in present cost and projected cost accelerated to anticipated midpoints of design and construction period activities. Project costs may change depending upon final design configurations, changed design criteria, or construction prices at the time of construction. Where projected construction costs exceed projected revenues, a project may be delayed to a future time when revenues become available. Where expenditures are found to be less than available funding, with MAC approval, candidate projects may be incorporated into the Project Work Plan for implementation. Details regarding the current Project Work Plan Budget are described in the 2003-05 Project Work Plan Section of this plan.

6.0 Priority Assessment

The Operations Study Team of the LVWCC has developed the methodology for prioritization of each proposed gradient control and bank protection capital expenditure in the Wash. Rating factors utilized in establishing proposed project priorities are described in Appendix F.

Unless otherwise noted, bank protection capital investments will occur following implementation of the next downstream gradient control facility. Where severe bank erosion is occurring, stabilization may succeed downstream gradient control implementation. Revegetation investments will follow bank stabilization, where practical. Unless otherwise noted, revegetation projects are planned for implementation in the same order as bank stabilization projects and are not shown in a separate priority evaluation within this Capital Improvements Plan.

Over the long-term life of the Wash CIP, priorities may change as need, funding, and other issues arise. Therefore SNWA, acting through the Operations Study Team and the MAC, will annually review the prioritization schedule, evaluation criteria, proposed candidate project list, and

available funding to assess current priorities. A summary of the criteria applied to assess prioritization, as developed by the Operations Study Team, and as approved by the MAC are as follows:

- Upstream Stability
- System Relationship
- Water Quality Enhancement
- Recreational Opportunity
- Public Safety
- Regulatory Permitting Requirements
- Access
- Cost Avoidance
- Availability of Other Funding

Detailed descriptions of these criteria are found in appendix F.

Annually, the SNWA staff calculates priority values for each proposed project based upon the criteria outlined above. These values and proposed project rankings are then reviewed, discussed, and/or modified by the Operations Study Team of the LVWCC. Project activity is then scheduled as much as practical, to follow priority rankings (Appendix G). Issues such as land ownership, construction conflict, potential cost savings in grouping several projects together under a single construction contract, and similar issues may cause some projects of lower priority to be scheduled for construction in conjunction with higher priority projects.

After SNWA develops a proposed project implementation schedule, the draft priority and project rankings are submitted to the MAC for further review and/or modification. SNWA then publishes those findings in annual updates of the Wash CIP and submits the update to the SNWA Board of Directors for review and action.

7.0 2003-05 Project Work Plan

The projects described in this Work Plan represent projects for which funding sources have been identified. This Project Work Plan represents a series of projects, which are a sub-set of the Candidate Project List as detailed in Appendix C. Project costs, descriptions, anticipated implementation schedule, and Work Plan funding details are presented below.

7.1 Work Plan Summary

The summary of capital projects to be funded as a part of this Project Work Plan are summarized as follows:

Table 3
2003-05 Project Work Plan Summary

Project No.	Project Name	Activity	Current Cost (\$ 1,000's)	Mid-point Cost (\$ 1,000's)
Grade Control Structures				
810R	Landfill Weir	Design, Construction	3,829	3,919
810F	Upper Diversion Weir	Design, Construction	8,107	8,671
810P	Powerline Crossing Weir	Design, Construction	6,719	7,077
810K	Demonstration Replacement Weir	Design	870	891
810V	DU Wetlands No. 1	Design	263	281
810Y	DU Wetlands No. 2	Design	279	298
Bank Protection Facilities				
830E	Bostick Bank Protection, North	Design, Construction	278	293
840E	Bostick Bank Protection, South	Design, Construction	350	383
830B	Demonstration Weir Bank Prot. North	Design, Construction	121	134
840D	Pabco Road Bank Protection, South	Design, Construction	244	268
Revegetation Programs				
870E	Bostick Weir, North	Design, Installation	138	139
880E	Bostick Weir, South	Design, Installation	115	116
870A	Fire Station, North	Design, Installation	47	47
880A	Fire Station, South	Design, Installation	47	47
870D	Pabco Road Weir, North	Design, Installation	92	93
870R	Landfill, North	Design, Installation	47	49
880R	Landfill, South	Design, Installation	47	49
870N	Rainbow Gardens, North	Design, Installation	138	144
880N	Rainbow Gardens, South	Design, Installation	115	120
870B	Demonstration Weir, North	Design, Installation	47	51
870P	Powerline North	Design, Installation	69	75
880P	Powerline South	Design, Installation	69	75
Design Studies and Misc. Programs				
860T	Sediment Study II	Design Study	100	103
860X	COE Feasibility Study	Design Study	1,500	1,627
860E	2004 Haul Contract	Materials Supply	771	796
860V	BOR Equipment Rental	Construction	470	470
860M	2005 Remapping	Design Study	130	138
860F	2005 Haul Contract	Materials Supply	771	828
860O	2004 Repair Allocation	Construction	100	104
860U	Haul Road Construction	Construction	550	571
Estimated Total Cost:			\$ 26,419	\$ 27,857

7.2 Project Descriptions

Work Plan projects are described by each Wash CIP element as follows:

7.2.1 Channel Bed Stabilization

The channel bed stabilization program focuses on the planning, design, and installation of grade control dams (weirs) necessary to flatten existing channel slopes to slow the velocity of flow in the Wash. The stabilization master plan calls for the installation of 22 channel grade control weirs. Seven of these 22 structures have been previously installed. One structure, the Rainbow Gardens Weir, is under construction as a part of SNWA's 170-A project, funded by the Water Capital Improvements Program. Grade control structure activities planned as a part of this Wash CIP Project Work Plan include:

810R Landfill Weir

Located approximately 1700 feet downstream of the Bostick Weir, this structure is intended to provide toe protection for the Bostick Weir and stabilization to upstream channel bed and banks. Design and construction activities are programmed for FY 03-04. The Project Work Plan includes approximately \$3.9 million for design and construction activities associated with this project.

810F Upper Diversion Weir

Located approximately 1900 feet downstream of the Clark County Advanced Wastewater Treatment Plant outfall, this structure is intended to act as a diversion and erosion control structure, allowing Wash flow to be diverted to a secondary channel during main channel maintenance and construction periods. A potential third use of this weir may be to divert Wash flows to the east for discharge into possible future off-channel constructed wetlands. At the request of Clark County Parks and Community Services Department, the project design will include a bridge crossing for public and maintenance access to the area on the northeast side of the Wash. Design activities are programmed for FY 03-04 and construction is programmed for FY 04-05. The Project Work Plan includes approximately \$8.7 million for this project.

810P Powerline Crossing Weir

Located approximately 1100 feet downstream of the proposed Rainbow Gardens Weir and approximately 1700 feet upstream of the Lake Las Vegas bypass pipeline inlet structure, this facility will provide toe erosion scour protection to the Rainbow Gardens Weir while controlling approximately 10 feet of vertical erosion potential in the Wash. At the request of Clark County Parks and Community Services Department, the project design will include a bridge crossing to provide public access to the Rainbow Gardens area, north of the Wash. Design and activities are programmed for FY 03-04 and construction activities are planned for FY 04-05. The Project Work Plan includes approximately \$7.1 million for this project.

810K Demonstration Weir Replacement

Located approximately 1400 feet upstream of the Wash confluence with Three Kids Wash, this structure was initially installed in 1999 as an emergency measure to slow local channel bed erosion. Planned construction will strengthen the structure and add hydraulic capacity necessary for the facility to withstand larger flood events. Design activities are

programmed for FY 03-04 and construction is programmed for FY 05-06. The Project Work Plan includes approximately \$891 thousand for design of this project.

810V Ducks Unlimited Wetlands No. 1

Located approximately 1,000 feet downstream of the Clark County Nature Center, this project is intended to stabilize the Wash channel bed and banks adjacent to the proposed Ducks Unlimited wetlands project. This project is of higher priority based upon the results of sediment studies which indicate this reach of the Wash will produce large amounts of sediment unless stabilized. Design activities are programmed for FY 04-05 and construction is planned in FY 05-06. The Project Work Plan includes approximately \$281 thousand for the design of this structure.

810Y Ducks Unlimited Wetlands No. 2

Located approximately 2,500 feet downstream of the Clark County Nature Center, this project is intended to stabilize the Wash channel bed and banks adjacent to the proposed Ducks Unlimited wetlands project. This project is of higher priority based upon the results of sediment studies which indicate this reach of the Wash will produce large amounts of sediment unless stabilized. Design activities are programmed for FY 04-05 and construction is planned in FY 05-06. The Project Work Plan includes approximately \$296 thousand for the design of this structure.

7.2.2 Channel Bank Protection

Channel bank protection projects are intended to stop or slow the process of bank erosion caused by meandering Wash flow. Bank protection includes the use of rock or broken concrete riprap, revegetation, and other means to provide stability. The Project Work Plan contemplates installing bank protection along the banks of the Wash, which are undergoing the most severe erosion and have high project priority rankings. If federal funding becomes available these projects may be included in future Bureau of Reclamation in-kind construction programs.

830E Bostick Weir Bank Protection, North

Located along a 1400-foot length of the north bank, immediately upstream of the Bostick Weir. This project will tie bank protection provided by the Bostick Weir construction to the downstream end of the third stage spillway of the Historic Lateral, in an area of highly erodible banks. Design and construction are planned for FY 03-04. This Project Work Plan includes \$293 thousand for this project.

840E Bostick Weir Bank Protection, South

Located along a 1400-foot length of the south bank of the Wash, immediately upstream of the Bostick Weir. The project will protect the bank downstream of the C-1 channel outfall facility and tie to bank protection provided by the construction of the Bostick Weir. A portion of the funding or construction for this project may come from private sources. Design and construction activities are programmed for FY 04-05. The Project Work Plan includes approximately \$383 thousand for this project.

830B Demonstration Weir Bank Protection, North

Located approximately 500 feet upstream of the current Demonstration Weir. This project will tie bank protection completed as a part of the Homestead Weir Bank Protection project to the Demonstration Weir, in an area of highly erodible north side

banks. Design and construction is planned for FY 04-05. The Project Work Plan includes approximately \$ 134 thousand for this work.

840D Pabco Road Weir Bank Protection South

Located immediately upstream of the Pabco Road Weir, this project will stabilize relatively low-height bank which has been damaged by lateral erosion during recent past flood events. Completion of the project will provide erosion protection to upper bank areas previously revegetated. Design and construction is planned for FY 04-05. The Project Work Plan includes approximately \$268 thousand for this work.

7.2.3 Revegetation Program

The third tier of erosion protection and stabilization of the Wash is provided by the revegetation of channel bed, banks, and over bank areas which have been previously disturbed or eroded or where less desirable vegetation is being replaced by more acceptable plant species. Generally, revegetation activities are scheduled to follow completion of downstream gradient control and adjacent bank protection installations.

870E and 880E Bostick Weir North and South Banks Re-vegetation

Located immediately upstream of Bostick Weir, activities will include removal of salt cedar, minor bank re-grading and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$254 thousand for this work.

870A and 880A, Fire Station North and South Bank Revegetation

Fire Station Weir construction in this area was completed by Lake Las Vegas in FY 00. Work under these projects will extend from the Fire Station Weir upstream to the planned toe of the Powerline Crossing Weir. Planning, design, and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$94 thousand for these projects.

870D Pabco Road Weir North Revegetation

Located immediately upstream of Pabco Road Weir activities will include removal of salt cedar, wetlands planting thinning and revegetation of cleared areas. Planning, design and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$93 thousand for this work.

870R and 880R Landfill North and South Banks Re-vegetation

Located immediately upstream of Landfill Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$98 thousand for this work.

870N and 880N Rainbow Gardens North and South Banks Revegetation

Located immediately upstream of Rainbow Gardens Weir, activities will include removal of salt cedar, minor bank regarding and revegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$265 thousand for this work.

870B Demonstration Weir, North Bank Re-vegetation

The north bank re-vegetation effort will stabilize and provide wetlands planting adjacent to planned bank protection in this area. Planning, design, and construction activities for the north bank are programmed for FY 04-05. The Project Work Plan includes approximately \$51 thousand for this project.

870P and 880P Powerline crossing North and South Banks Re-vegetation

Located immediately upstream of Powerline Crossing Weir, activities will include removal of salt cedar, minor bank grading and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$151 thousand for this work.

7.2.4 Design Studies and Miscellaneous Programs**860T Sediment Transport Study II**

This project provides consultant services for analysis of sediment transport under varying discharge and wetlands conditions. Some fieldwork to sample actual sediment transport and erosion scour at structure sites will be conducted. Information gained through this study will be used to modify theoretical predictions conducted under the 860S project and will provide additional design recommendations for future projects. Work under the project is expected to commence in FY 03-04 and require a budget of \$ 103 thousand.

860X US Army Corps of Engineers

This project will focus on water resource problems and solutions along the Lower Las Vegas Wash. The reconnaissance Phase of this investigation was completed August 1997. This feasibility study will complete the assessment of Federal interests. Work under the project is expected to commence in FY 04-05 and require a budget of \$1,627 thousand.

860E 2004 Materials Hauling Contract

This on-call project focuses on the acquisition and delivery of rock rip rap and concrete debris, when available, for use in erosion control projects in the Wash. Funding for this project is programmed for FY 03-04. The Project Work Plan includes approximately \$796 thousand for this project.

860V Bureau of Reclamation Equipment Rental Reimbursement

A contract approved by the SNWA Board of Directors in August 2003, allows SNWA to reimburse the Bureau of Reclamation for the cost of construction equipment rental used for construction in the Las Vegas Wash. Funding for this project is programmed for FY 03-04 through FY04-05. Approximately \$380 thousand has been included in the Project Work Plan for FY 03-04 and \$90 thousand for FY04-05.

860M Topographic Remapping

This project provides for updating topographic mapping information for the Wash from Lake Las Vegas Intake to the City of Las Vegas wastewater outfall. Flood damages and construction activities modify topography over time. The remapping program allows up-to-date mapping to be available for ongoing construction and maintenance activities.

Remapping activities are scheduled for FY04-05. Approximately \$138 thousand has been programmed in the Project Work Plan for this effort.

860F 2005 Materials Hauling Contract

This on-call project focuses on the acquisition and delivery of rock rip rap and concrete debris, when available, for use in erosion control projects in the Wash. Funding for this project is programmed for FY 04–05. The Project Work Plan includes approximately \$828 thousand for this project.

860O 2004 Emergency Repair Allocation

This 2003-05 Work Plan anticipates the construction of four new weir structures, bringing a total of 10 weir structures in place in the Las Vegas Wash. Similarly, over four miles of bank protection will have been installed as well. It is anticipated that storm runoff events occurring in the Las Vegas Wash may have the potential to periodically cause erosion and scour damage requiring construction repair costing in excess of available maintenance funds for Las Vegas Wash facilities. Funds under this project, totaling \$104 thousand, will be allocated under this Work Plan and will be set aside for use in repair reconstruction activities, should the need arise.

860U Haul Road Construction

This project will provide access to future erosion control facilities. Work under the project is expected to commence in FY 04-05 and require a budget of \$571 thousand.

7.3 Work Plan Revenues

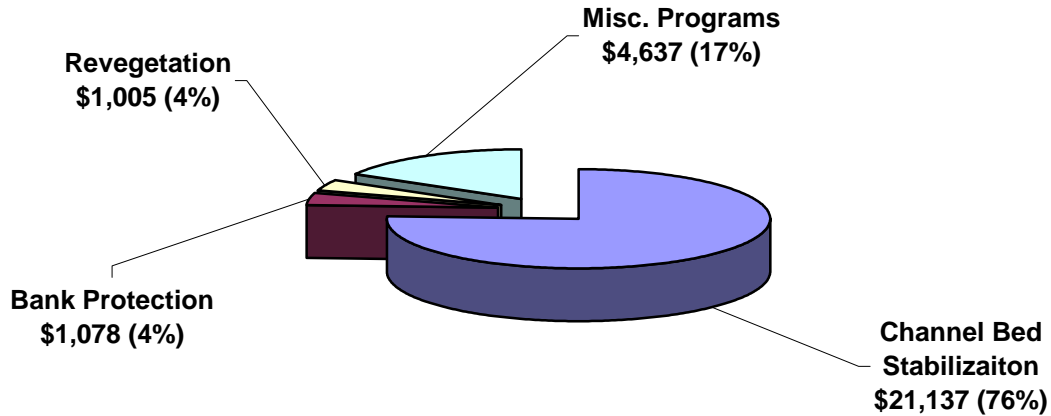
Currently approximately \$1.4 million in unallocated Las Vegas Wash sales tax revenues are available to fund a portion of current Work Plan Projects. During the term of the 2003-2005 Work Plan it is anticipated that an additional \$4.8 million will be generated from sales tax revenues. Approximately \$22 million of Work Plan funding requirement will be derived from an SNWA inter-account loan levied against future ¼ cent Las Vegas Wash sales tax revenues. The planned repayment period is 10 years. Repayment will include principal and interest for funds borrowed.

Following the completion of the 2003-04 Project Work Plan, up to the time the inter-account loan is repaid, it is anticipated that funding for Wash capital improvements will be acquired through other local, state, and federal funding sources, if identified and available. SNWA will actively seek either financial assistance and/or in-kind services performed by others to aid in implementation of this and future Work Plans.

7.4 Work Plan Expenses

This 2003-05 Project Work Plan contemplates the expenditure of \$27.8 million. Anticipated expenditures are shown in the above Work Plan Summary and are segregated as shown on the following graph:

Figure 6
2003-05 Projected Work Plan Expenditures
 (in \$ 1,000's)



7.5 Ownership

The majority of the planned erosion control facilities lie within the boundaries of the Clark County Wetlands Park. Consistent with the Las Vegas Wash Cooperative Agreement, SNWA will transfer ownership of all facilities, including erosion control structures, bank stabilization projects, and other facilities as deemed appropriate by SNWA and Clark County, to Clark County upon completion and acceptance of each facility described in this Work Plan.

7.6 Facility Operation and Maintenance

In accordance with the Las Vegas Wash Cooperative Agreement, SNWA will operate and maintain Wash facilities, including all erosion control structures and bank stabilization projects described in this Wash CIP and Work Plan. The Cooperative Agreement, requires the SNWA's operations and maintenance activities to conform to a Las Vegas Wash Operations and Maintenance Plan. The SNWA will conduct these activities in conformance with the Operations and Maintenance Plan for the Las Vegas Wash. SNWA will provide operations, maintenance, oversight and monitoring of existing Las Vegas Wash facilities, financed through assessments levied to individual MAC member agencies. As in the past, the US Bureau of Reclamation would normally be provided construction related maintenance activities, as annual federal funding for construction activities becomes available.

Appendix A – 2003-05 Project Work Plan

**2003 Las Vegas Wash Capital Improvements Plan
2003-05 PROJECT WORK PLAN**

Project Number	Project Name	Design & Permitting			Construction			Annual Budget (Midpoint \$)			
		Budget Year	Projected Start	Projected Finish	Budget Year	Projected Start	Projected Finish	2003-04 (\$)	2004-05 (\$)		Total (\$)
Grade Control Structures											
810R	Landfill Weir	2003-04	Aug-03	Feb-04	2003-04	Feb-04	Jun-04	\$3,919,064	\$0		\$3,919,064
810F	Upper Diversion Weir	2003-04	Nov-03	Oct-04	2004-05	Feb-05	Nov-05	\$775,740	\$7,895,459		\$8,671,199
810P	Powerline Crossing Weir	2003-04	Jul-03	Aug-04	2004-05	Sep-04	Jun-05	\$636,274	\$6,440,585		\$7,076,859
810K	Demonstration Repl. Weir	2003-04	Oct-03	Oct-04	2005-06	Oct-05	Jul-06	\$891,479	\$0		\$891,479
810V	DU Wetlands No. 1 Weir	2004-05	Feb-05	Jul-05	2005-06	Jan-06	May-06	\$0	\$280,542		\$280,542
810Y	DU Wetlands No. 2 Weir	2004-05	Feb-05	Jul-05	2005-06	Jan-06	May-06	\$0	\$297,607		\$297,607
Grade Control Total:								\$6,222,557	\$14,914,193		\$21,136,750
Bank Protection Programs											
830E	Bostick BP - N	2003-04	Sep-03	Feb-04	2003-04	Feb-04	Apr-04	\$293,217	\$0		\$293,217
840E	Bostick BP - S	2003-04	Sep-03	Feb-04	2004-05	Feb-05	Apr-05	\$0	\$383,138		\$383,138
830B	Demonstration BP - N	2004-05	Sep-04	Feb-05	2004-05	Feb-05	Apr-05	\$0	\$133,772		\$133,772
840D	Pabco Road BP - S	2004-05	Sep-04	Feb-05	2004-05	Feb-05	Apr-05	\$0	\$268,257		\$268,257
Bank Protection Total:								\$293,217	\$785,167		\$1,078,384
Subtotal, Grade Control & Bank Protection:								\$6,515,774	\$15,699,360		\$22,215,134

**2003 Las Vegas Wash Capital Improvements Plan
2003-05 PROJECT WORK PLAN**

Project Number	Project Name	Design & Permitting			Construction			Annual Budget (Midpoint \$)			
		Budget Year(s)	Projected Start	Projected Finish	Budget Year	Projected Start	Projected Finish	2003-04 (\$)	2004-05 (\$)		Total (\$)
Revegetation Programs											
870E	Bostick Reveg. - N	2003-04	Jul-03	Oct-03	2003-04	Nov-03	Dec-03	\$138,708	\$0		\$138,708
880E	Bostick Reveg. - S	2003-04	Jul-03	Oct-03	2003-04	Nov-03	Dec-03	\$115,757	\$0		\$115,757
870A	Fire Station Reveg. - N	2003-04	Jul-03	Oct-03	2003-04	Nov-03	Dec-03	\$46,890	\$0		\$46,890
880A	Fire Station Reveg. - S	2003-04	Jul-03	Oct-03	2003-04	Nov-03	Dec-03	\$46,890	\$0		\$46,890
870D	Pabco Reveg. - N	2003-04	Jul-03	Oct-03	2003-04	Nov-03	Dec-03	\$92,781	\$0		\$92,781
870R	Landfill Reveg. - N	2004-05	Jul-04	Oct-04	2004-05	Nov-04	Dec-04	\$0	\$48,789		\$48,789
880R	Landfill Reveg. - S	2004-05	Jul-04	Oct-04	2004-05	Nov-04	Dec-04	\$0	\$48,789		\$48,789
870N	Rainbow Gardens Reveg. - N	2004-05	Jul-04	Oct-04	2004-05	Nov-04	Dec-04	\$0	\$144,272		\$144,272
880N	Rainbow Gardens Reveg. - S	2004-05	Jul-04	Oct-04	2004-05	Nov-04	Dec-04	\$0	\$120,400		\$120,400
870B	Demonstration Reveg. - N	2004-05	Jul-04	Oct-04	2004-05	Nov-05	Dec-05	\$0	\$50,664		\$50,664
870P	Powerline Reveg. - N	2004-05	Jul-04	Oct-04	2004-05	Nov-05	Dec-05	\$0	\$75,477		\$75,477
880P	Powerline Reveg. - S	2004-05	Jul-04	Oct-04	2004-05	Nov-05	Dec-05	\$0	\$75,477		\$75,477
Revegetation Total:								\$441,026	\$563,868		\$1,004,894
Design Studies and Miscellaneous Programs											
860T	Sediment Study II	2003-04	Mar-04	Oct-04				\$103,110	\$0		\$103,110
860X	COE Feasibility Study	2004-06	Oct-04	Oct-06				\$0	\$1,627,114		\$1,627,114
860E	2004 Haul Contract	2003-04	Oct-03	Dec-03	2003-04	Jan-04	Dec-04	\$796,277	\$0		\$796,277
860V	BOR Equipment Rental				2003-04	Jan-03	May-04	\$380,000	\$90,000		\$470,000
860M	2005 Remapping	2004-05	Mar-05	May-05				\$0	\$138,263		\$138,263
860F	2005 Haul Contract	2004-05	Oct-04	Dec-04	2004-05	Jan-05	Dec-05	\$0	\$828,172		\$828,172
860O	2004 Repair Allocation				2004-05	Jul-04	Sep-04	\$0	103,621		\$103,621
860U	Haul Road Construct.				2004-05	Jul-04	Oct-04	\$0	\$570,833		\$570,833
Misc. Programs Total:								\$1,279,387	\$3,358,003		\$4,637,390
Subtotal, Revegetation & Misc. Programs:								\$1,720,413	\$3,921,871		\$5,642,284
Total Work Plan								\$8,236,187	\$19,621,231		\$27,857,418

Appendix B – Work Plan Project Descriptions

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Landfill Weir – W5.1

Project Number:
810R

Project Status:
Planning, Design, Construction

Project Description:
Located approximately 1700 feet downstream of the Bostick Weir, this structure is intended to provide toe protection for the Bostick Weir and stabilization to upstream channel bed and banks. Design and construction activities are programmed for FY 03-04. The Project Work Plan includes approximately \$3.9 million for design and construction activities associated with this project. The Landfill Weir will be approximately 400 ft. in length, 155 ft. in width and 6 ft. in height.

Funding Sources:
Design activities will be funded through an inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects. Funding for construction activities has not been identified.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	11/03
Design Start	08/03 A
Design Complete	02/04
Advertise for Bids	11/03
Bid Opening	n/a
Contract Award	02/04
Construction NTP	02/04
Substantial Completion	05/04
Final Completion	06/04

Project Costs:	
<u>Activity</u>	<u>Midpoint Cost (\$1000) *</u>
Administrative	\$0
Environmental	\$33
Rights-of-Way	\$0
Design	\$327
Construction Management	\$233
Construction	\$3326
Award Amount	\$0
Change Orders	\$0
Total \$	\$3919

Project Dates and Costs are projected unless indicated by an “A” for “Actual”

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Upper Diversion Weir – W9.6

Project Number:
810F

Project Status
Planning, Design, Construction

Project Description:
Located approximately 1900 feet downstream of the Clark County Advanced Wastewater Treatment Plant outfall, this structure is intended to act as a diversion and erosion control structure, allowing Wash flow to be diverted to a secondary channel during main channel maintenance and construction periods. A potential third use of this weir may be to divert Wash flows to the east for discharge into possible future off-channel constructed wetlands. At the request of Clark County Parks and Community Services Department, the project design will include a bridge crossing for public and maintenance access to the area on the northeast side of the Wash. Design activities are programmed for FY 03-04 and construction is programmed for FY 04-05. The Project Work Plan includes approximately \$8.7 million for this project. The Upper Diversion Weir is approximately 600 ft. in length, 114 ft. in width and 10 ft. in height.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	12/02	A
Design Start	11/03	A
Design Complete	10/04	
Advertise for Bids	11/04	
Bid Opening	12/04	
Contract Award	01/05	
Construction NTP	02/05	
Substantial Completion	09/05	
Final Completion	11/05	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$70
Rights-of-Way		\$0
Design		\$705
Construction Management		\$517
Construction		\$7379
Award Amount		\$0
Change Orders		\$0
Total \$		\$8671

Project Dates and Costs are projected unless indicated by an “A” for “Actual”

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Powerline Crossing Weir – W3.3

Project Number:
810P

Project Status:
Planning, Design, Construction

Project Description:
 Located approximately 1100 feet downstream of the proposed Rainbow Gardens Weir and approximately 1700 feet upstream of the Lake Las Vegas bypass pipeline inlet structure, this facility will provide toe erosion scour protection to the Rainbow Gardens Weir while controlling approximately 10 feet of vertical erosion potential in the Wash. At the request of Clark County Parks and Community Services Department, the project design will include a bridge crossing to provide public access to the Rainbow Gardens area, north of the Wash. Design and activities are programmed for FY 03-04 and construction activities are planned for FY 04-05. The Project Work Plan includes approximately \$7.1 million for this project.
 The Powerline Crossing Weir is approximately 192 ft. in length, 103 ft. in width and 12 ft. in height.

Funding Sources:
 Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects.

Project Schedule	Date	A
Activity	Date	A
Prelim. Design Complete	08/02	A
Design Start	07/03	A
Design Complete	08/04	
Advertise for Bids	05/04	
Bid Opening	06/04	
Contract Award	08/04	
Construction NTP	09/04	
Substantial Completion	05/05	
Final Completion	06/05	

Project Costs:	Midpoint
Activity	Cost (\$1000) *
Administrative	\$0
Environmental	\$58
Rights-of-Way	\$0
Design	\$578
Construction Management	\$422
Construction	\$6019
Award Amount	\$0
Change Orders	\$0
Total \$	\$7077

Project Dates and Costs are projected unless indicated by an “A” for “Actual”

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

<p>Project Title:</p> <p style="font-size: 1.2em; margin-top: 10px;">Demonstration Weir – W3.9 Replacement</p>	<p>Project Number:</p> <p style="margin-top: 5px;">810K</p> <hr/> <p>Project Status:</p> <p style="margin-top: 5px;">Planning and Design</p>
--	--

Project Description:
 Located approximately 1400 feet upstream of the Wash confluence with Three Kids Wash, this structure was initially installed in 1999 as an emergency measure to slow local channel bed erosion. Planned construction will strengthen the structure and add hydraulic capacity necessary for the facility to withstand larger flood events. Design activities are programmed for FY 03-04 and construction is programmed for FY 05-06. The Project Work Plan includes approximately \$891 thousand for design of this project.
 The Demonstration Replacement Weir is approximately 595 ft. in length, 377 ft. in width and 16 ft. in height.

Funding Sources:
 Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects.

<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: left; padding-bottom: 5px;">Project Schedule</th> </tr> <tr> <th style="text-align: left; padding: 2px 5px;"><u>Activity</u></th> <th style="text-align: left; padding: 2px 5px;"><u>Date</u></th> <th style="padding: 2px 5px;"></th> </tr> <tr> <td style="padding: 2px 5px;">Prelim. Design Complete</td> <td style="padding: 2px 5px;">04/03</td> <td style="padding: 2px 5px;">A</td> </tr> <tr> <td style="padding: 2px 5px;">Design Start</td> <td style="padding: 2px 5px;">10/03</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Design Complete</td> <td style="padding: 2px 5px;">10/04</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Advertise for Bids</td> <td style="padding: 2px 5px;">07/05</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Bid Opening</td> <td style="padding: 2px 5px;">08/05</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Contract Award</td> <td style="padding: 2px 5px;">09/05</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Construction NTP</td> <td style="padding: 2px 5px;">10/05</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Substantial Completion</td> <td style="padding: 2px 5px;">06/06</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">Final Completion</td> <td style="padding: 2px 5px;">07/06</td> <td></td> </tr> </table>	Project Schedule			<u>Activity</u>	<u>Date</u>		Prelim. Design Complete	04/03	A	Design Start	10/03		Design Complete	10/04		Advertise for Bids	07/05		Bid Opening	08/05		Contract Award	09/05		Construction NTP	10/05		Substantial Completion	06/06		Final Completion	07/06		<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; padding-bottom: 5px;">Project Costs:</th> <th style="text-align: left; padding-bottom: 5px;">Midpoint</th> </tr> <tr> <th style="text-align: left; padding: 2px 5px;"><u>Activity</u></th> <th style="padding: 2px 5px;"></th> <th style="text-align: left; padding: 2px 5px;"><u>Cost (\$1000)</u> *</th> </tr> <tr> <td style="padding: 2px 5px;">Administrative</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$0</td> </tr> <tr> <td style="padding: 2px 5px;">Environmental</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$81</td> </tr> <tr> <td style="padding: 2px 5px;">Rights-of-Way</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$0</td> </tr> <tr> <td style="padding: 2px 5px;">Design</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$810</td> </tr> <tr> <td style="padding: 2px 5px;">Construction Management</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$611</td> </tr> <tr> <td style="padding: 2px 5px;">Construction</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$8727</td> </tr> <tr> <td style="padding: 2px 5px;"> Award Amount</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$0</td> </tr> <tr> <td style="padding: 2px 5px;"> Change Orders</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$0</td> </tr> <tr> <td style="padding: 2px 5px; text-align: right;">Total \$</td> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;">\$10229</td> </tr> </table>	Project Costs:		Midpoint	<u>Activity</u>		<u>Cost (\$1000)</u> *	Administrative		\$0	Environmental		\$81	Rights-of-Way		\$0	Design		\$810	Construction Management		\$611	Construction		\$8727	Award Amount		\$0	Change Orders		\$0	Total \$		\$10229
Project Schedule																																																																			
<u>Activity</u>	<u>Date</u>																																																																		
Prelim. Design Complete	04/03	A																																																																	
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Change Orders		\$0																																																																	
Total \$		\$10229																																																																	

Project Dates and Costs are projected unless indicated by an “A” for “Actual

Remarks:
 The Project Work Plan for 2003-2005 cover only Environmental and Design costs, \$891,479

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:**DU Wetlands No. 1 Weir – W8.5****Project Number:**

810V

Project Status:

Planning and Design

Project Description:

Located approximately 1,000 feet downstream of the Clark County Nature Center, this project is intended to stabilize the Wash channel bed and banks adjacent to the proposed Ducks Unlimited wetlands project. This project is of higher priority based upon the results of sediment studies which indicate this reach of the Wash will produce large amounts of sediment unless stabilized. Design activities are programmed for FY 04-05 and construction is planned in FY 05-06. The Project Work Plan includes approximately \$281 thousand for the design of this structure. The DU Wetlands No. 1 Weir is approximately 300 ft. in length, 205 ft. in width and 9 ft. in height.

Funding Sources:

Design activities will be funded through an Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects. Funding for construction activities has not been identified.

Project Schedule

<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	02/04
Design Start	02/05
Design Complete	07/05
Advertise for Bids	07/05
Bid Opening	n/a
Contract Award	10/05
Construction NTP	01/06
Substantial Completion	03/06
Final Completion	05/06

Project Costs:

<u>Activity</u>	<u>Midpoint Cost (\$1000)</u> *
Administrative	\$0
Environmental	\$26
Rights-of-Way	\$0
Design	\$255
Construction Management	\$185
Construction	\$2639
Award Amount	\$0
Change Orders	\$0
Total \$	\$3105

Project Dates and Costs are projected unless indicated by an “A” for “Actual”

Remarks:

The Project Work Plan for 2003-2005 cover only Environmental and Design costs, \$280,542

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

DU Wetlands No. 2 Weir – W8.8

Project Number:
810Y

Project Status:
Planning and Design

Project Description:
Located approximately 2,500 feet downstream of the Clark County Nature Center, this project is intended to stabilize the Wash channel bed and banks adjacent to the proposed Ducks Unlimited wetlands project. This project is of higher priority based upon the results of sediment studies which indicate this reach of the Wash will produce large amounts of sediment unless stabilized. Design activities are programmed for FY 04-05 and construction is planned in FY 05-06. The Project Work Plan includes approximately \$298 thousand for the design of this structure. The DU Wetlands No. 2 Weir is approximately 300 ft. in length, 200 ft. in width and 8 ft. in height.

Funding Sources:
Design activities will be funded through an Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects. Funding for construction activities has not been identified.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	02/04
Design Start	02/05
Design Complete	07/05
Advertise for Bids	10/05
Bid Opening	n/a
Contract Award	12/05
Construction NTP	01/06
Substantial Completion	04/06
Final Completion	05/06

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$27
Rights-of-Way		\$0
Design		\$271
Construction Management		\$196
Construction		\$2801
Award Amount		\$0
Change Orders		\$0
Total \$		\$3295

Project Dates and Costs are projected unless indicated by an “A” for “Actual

Remarks:
The Project Work Plan for 2003-2005 cover only Environmental and Design costs, \$297,607

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Bostick Bank Protection, North

Project Number:
830E

Project Status:
Planning, Design, Construction

Project Description:
Located along a 1400-foot length of the north bank, immediately upstream of the Bostick Weir. This project will tie bank protection provided by the Bostick Weir construction to the downstream end of the third stage spillway of the Historic Lateral, in an area of highly erodable banks. Design and construction are planned for FY 03-04. This Project Work Plan includes \$293 thousand for this project. The Bostick bank stabilization is approximately 1350 ft. in length, 6 ft. in width and 8 ft. in height.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects. Possible alternative funding through the US Bureau of Reclamation.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	09/03	
Design Complete	02/04	
Advertise for Bids	10/03	
Bid Opening	n/a	
Contract Award	12/03	
Construction NTP	02/04	
Substantial Completion	04/04	
Final Completion	05/04	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$2
Rights-of-Way		\$0
Design		\$8
Construction Management		\$8
Construction		\$275
Award Amount		\$0
Change Orders		\$0
Total \$		\$293

Project Dates and Costs are projected unless indicated by an "A" for "Actual"

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Bostick Bank Protection, South

Project Number:
840E

Project Status:
Planning, Design, Construction

Project Description:
Located along a 1400-foot length of the south bank of the Wash, immediately upstream of the Bostick Weir. The project will protect the bank downstream of the C-1 channel outfall facility and tie to bank protection provided by the construction of the Bostick Weir. A portion of the funding or construction for this project may come from private sources. Design and construction activities are programmed for FY 04-05. The Project Work Plan includes approximately \$383 thousand for this project. The Bostick bank stabilization is approximately 1200 ft. in length, 6 ft. in width and 10 ft. in height.

Funding Sources:
It is anticipated that the private developer of the C-1 channel outfall will provide funding, design, and construction. Alternative public funding sources include Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation of water and wastewater projects or possible alternative funding through the US Bureau of Reclamation.

Project Schedule		
Activity	Date	
Prelim. Design Complete	07/03	A
Design Start	09/03	
Design Complete	02/04	
Advertise for Bids	10/03	
Bid Opening	n/a	
Contract Award	12/03	
Construction NTP	02/05	
Substantial Completion	04/05	
Final Completion	05/05	

Project Costs:		Midpoint
Activity		Cost (\$1000) *
Administrative		\$0
Environmental		\$2
Rights-of-Way		\$0
Design		\$10
Construction Management		\$11
Construction		\$360
Award Amount		\$0
Change Orders		\$0
Total \$		\$383

Project Dates and Costs are projected unless indicated by an “A” for “Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Demonstration Bank Protection,
North**

Project Number:
830B

Project Status:
Planning, Design, Construction

Project Description:
Located approximately 500 feet upstream of the current Demonstration Weir. This project will tie bank protection completed as a part of the Homestead Weir Bank Protection project to the Demonstration Weir, in an area of highly erodible north side banks. Design and construction is planned for FY 04-05. The Project Work Plan includes approximately \$134 thousand for this work. The Demonstration bank stabilization is approximately 390 ft. in length, 6 ft. in width and 10 ft. in height.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects. Possible alternative funding through the US Bureau of Reclamation.

Project Schedule	Activity	Date	
	Prelim. Design Complete	07/03	A
	Design Start	09/04	
	Design Complete	02/05	
	Advertise for Bids	10/04	
	Bid Opening	n/a	
	Contract Award	12/04	
	Construction NTP	02/05	
	Substantial Completion	04/05	
	Final Completion	05/05	

Project Costs:	Activity	Midpoint Cost (\$1000) *
	Administrative	\$0
	Environmental	\$2
	Rights-of-Way	\$0
	Design	\$4
	Construction Management	\$4
	Construction	\$124
	Award Amount	\$0
	Change Orders	\$0
	Total \$	\$134

Project Dates and Costs are projected unless indicated by an "A" for "Actual"

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Pabco Bank Protection, South

Project Number:
840D

Project Status:
Planning, Design, Construction

Project Description:
Located immediately upstream of the Pabco Road Weir, this project will stabilize relatively low-height bank which has been damaged by lateral erosion during recent past flood events. Completion of the project will provide erosion protection to upper bank areas previously re-vegetated. Design and construction is planned for FY 04-05. The Project Work Plan includes approximately \$268 thousand for this work. The Pabco bank stabilization is approximately 1180 ft. in length, 6 ft. in width and 8 ft. in height

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects. Possible alternative funding through the US Bureau of Reclamation.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	09/04	
Design Complete	02/05	
Advertise for Bids	10/04	
Bid Opening	n/a	
Contract Award	12/04	
Construction NTP	02/05	
Substantial Completion	04/05	
Final Completion	05/05	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$2
Rights-of-Way		\$0
Design		\$7
Construction Management		\$8
Construction		\$251
Award Amount		\$0
Change Orders		\$0
Total \$		\$268

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Bostick Weir, North,
Revegetation**

Project Number:
870E

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Bostick Weir, activities will include removal of salt cedar, minor bank re-grading and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$139 thousand for this work. Bostick Weir Re-vegetation will provide approximately 6 acres of erosion protection and stabilization of the Las Vegas Wash north bank upstream of the Bostick Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	07/03	A
Design Complete	10/03	
Advertise for Bids	n/a	
Bid Opening	n/a	
Contract Award	n/a	
Construction NTP	11/03	
Substantial Completion	12/03	
Final Completion	12/03	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$32
Construction		\$106
Award Amount		\$0
Change Orders		\$0
Total \$		\$139

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Bostick Weir, South,
Revegetation**

Project Number:
880E

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Bostick Weir, activities will include removal of salt cedar, minor bank re-grading and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$116 thousand for this work. Bostick Weir Re-vegetation will provide approximately 5 acres of erosion protection and stabilization of the Las Vegas Wash south bank immediately upstream of the Bostick Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	07/03	A
Design Complete	10/03	
Advertise for Bids	n/a	
Bid Opening	n/a	
Contract Award	n/a	
Construction NTP	11/03	
Substantial Completion	12/03	
Final Completion	12/03	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$27
Construction		\$88
Award Amount		\$0
Change Orders		\$0
Total \$		\$116

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Fire Station, North,
Revegetation**

Project Number:
870A

Project Status:
Planning, Design, Installation

Project Description:
Fire Station Weir construction in this area was completed by Lake Las Vegas in FY 00. Work under these projects will extend from the Fire Station Weir upstream to the planned toe of the Powerline Crossing Weir. Planning, design, and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$47 thousand for these projects. This project will stabilize approximately 2 acres of north bank of the Las Vegas Wash from the existing Fire Station Weir upstream to the proposed Powerline Crossing Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	07/03	A
Design Complete	10/03	
Advertise for Bids	n/a	
Bid Opening	n/a	
Contract Award	n/a	
Construction NTP	11/03	
Substantial Completion	12/03	
Final Completion	12/03	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$11
Construction		\$35
Award Amount		\$0
Change Orders		\$0
Total \$		\$47

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Fire Station, South,
Revegetation**

Project Number:
880A

Project Status:
Planning, Design, Installation

Project Description:
Fire Station Weir construction in this area was completed by Lake Las Vegas in FY 00. Work under these projects will extend from the Fire Station Weir upstream to the planned toe of the Powerline Crossing Weir. Planning, design, and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$47 thousand for these projects. This project will stabilize approximately 2 acres of south channel bank of the Las Vegas Wash from the existing Fire Station Weir, upstream to the site of the proposed Powerline Crossing Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	07/03	A
Design Complete	10/03	
Advertise for Bids	n/a	
Bid Opening	n/a	
Contract Award	n/a	
Construction NTP	11/03	
Substantial Completion	12/03	
Final Completion	12/03	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$11
Construction		\$35
Award Amount		\$0
Change Orders		\$0
Total \$		\$47

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Pabco Weir, North, Re-vegetation

Project Number:
870D

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Pabco Road Weir activities will include removal of salt cedar, wetlands planting thinning and re-vegetation of cleared areas. Planning, design and installation activities are programmed for FY 03-04. The Project Work Plan includes approximately \$93 thousand for this work. Pabco Weir Re-vegetation will provide approximately 4 acre of erosion protection and stabilization along the Las Vegas Wash north bank immediately upstream of the Pabco Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	07/03	A
Design Start	07/03	A
Design Complete	10/03	
Advertise for Bids	n/a	
Bid Opening	n/a	
Contract Award	n/a	
Construction NTP	11/03	
Substantial Completion	12/03	
Final Completion	12/03	

Project Costs:		Midpoint	
<u>Activity</u>		<u>Cost (\$1000)</u>	*
Administrative		\$0	
Environmental		\$1	
Rights-of-Way		\$0	
Design		\$0	
Construction Management		\$21	
Construction		\$71	
Award Amount		\$0	
Change Orders		\$0	
Total \$		\$93	

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Landfill Weir, North,
Revegetation**

Project Number:
870K

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Landfill Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$49 thousand for this work. Landfill Weir Re-vegetation will provide approximately 2 acre of erosion protection and stabilization along the Las Vegas Wash north bank immediately upstream of the Landfill Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/04
Substantial Completion	12/04
Final Completion	12/04

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$11
Construction		\$37
Award Amount		\$0
Change Orders		\$0
Total \$		\$49

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**Landfill Weir, South,
Revegetation**

Project Number:
880R

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Landfill Weir, activities will include removal of salt cedar, minor bank regrading and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$49 thousand for this work. Landfill Weir Re-vegetation will provide approximately 2 acres of erosion protection and stabilization along the Las Vegas Wash south bank immediately upstream of the Landfill Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/04
Substantial Completion	12/04
Final Completion	12/04

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$11
Construction		\$37
Award Amount		\$0
Change Orders		\$0
Total \$		\$49

Project Dates and Costs are projected unless indicated by an "A" for "Actual"

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Rainbow Gardens Weir, North, Revegetation

Project Number:
870N

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Rainbow Gardens Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$144 thousand for this work. Rainbow Gardens Weir Revegetation will provide approximately 6 acre of erosion protection and stabilization along the Las Vegas Wash north bank immediately upstream of the Rainbow Gardens Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/04
Substantial Completion	12/04
Final Completion	12/04

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$33
Construction		\$110
Award Amount		\$0
Change Orders		\$0
Total \$		\$144

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Rainbow Gardens Weir, South, Revegetation

Project Number:
880N

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Rainbow Gardens Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$120 thousand for this work. Rainbow Gardens Weir Revegetation will provide approximately 5 acres of erosion protection and stabilization along the Las Vegas Wash south bank immediately upstream of the Rainbow Gardens Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

<u>Project Schedule</u>	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/04
Substantial Completion	12/04
Final Completion	12/04

<u>Project Costs:</u>	<u>Midpoint</u>	
<u>Activity</u>	<u>Cost (\$1000)</u>	*
Administrative	\$0	
Environmental	\$1	
Rights-of-Way	\$0	
Design	\$0	
Construction Management	\$27	
Construction	\$92	
Award Amount	\$0	
Change Orders	\$0	
Total \$	\$120	

Project Dates and Costs are projected unless indicated by an "A" for "Actual"

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Demonstration Weir, North, Revegetation

Project Number:
870B

Project Status:
Planning, Design, Installation

Project Description:
The north bank re-vegetation effort will stabilize and provide wetlands planting adjacent to planned bank protection in this area. Planning, design, and construction activities for the north bank are programmed for FY 04-05. The Project Work Plan includes approximately \$51 thousand for this project. This project will stabilize approximately 2 acres of the Las Vegas Wash north bank from the Demonstration Weir upstream to the future proposed Homestead Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

<u>Project Schedule</u>	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/05
Substantial Completion	12/05
Final Completion	12/05

<u>Project Costs:</u>	<u>Midpoint</u>	
<u>Activity</u>	<u>Cost (\$1000)</u>	*
Administrative	\$0	
Environmental	\$1	
Rights-of-Way	\$0	
Design	\$0	
Construction Management	\$12	
Construction	\$38	
Award Amount	\$0	
Change Orders	\$0	
Total \$	\$51	

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Powerline Crossing Weir, North, Revegetation

Project Number:
870P

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Powerline Crossing Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$75 thousand for this work. This project will stabilize approximately 3 acres of the Las Vegas Wash north bank from the Powerline Weir upstream to the future proposed Rainbow Gardens Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/05
Substantial Completion	12/05
Final Completion	12/05

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$17
Construction		\$57
Award Amount		\$0
Change Orders		\$0
	Total \$	\$75

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Powerline Crossing Weir, South, Revegetation

Project Number:
880P

Project Status:
Planning, Design, Installation

Project Description:
Located immediately upstream of Powerline Crossing Weir, activities will include removal of salt cedar, minor bank regarding and re-vegetation of cleared areas and the lakebed. Planning, design and installation activities are programmed for FY 04-05. The Project Work Plan includes approximately \$75 thousand for this work. This project will stabilize approximately 3 acres of the Las Vegas Wash south bank from the Powerline Crossing Weir upstream to the future proposed Rainbow Gardens Weir.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	07/04
Design Start	07/04
Design Complete	10/04
Advertise for Bids	n/a
Bid Opening	n/a
Contract Award	n/a
Construction NTP	11/05
Substantial Completion	12/05
Final Completion	12/05

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$1
Rights-of-Way		\$0
Design		\$0
Construction Management		\$17
Construction		\$57
Award Amount		\$0
Change Orders		\$0
	Total \$	\$75

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Sediment Transport Study II

Project Number:
860T

Project Status:
Design Study

Project Description:
This project provides consultant services for analysis of sediment transport under varying discharge and wetlands conditions. Some fieldwork to sample actual sediment transport and erosion scour at structure sites will be conducted. Information gained through this study will be used to modify theoretical predictions conducted under the 860S project and will provide additional design recommendations for future projects. Work under the project is expected to commence in FY 03-04 and require a budget of \$ 103 thousand.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation to water and wastewater projects.

<u>Project Schedule</u>	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	
Design Start	03/04
Design Complete	10/04
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	
Substantial Completion	
Final Completion	

<u>Project Costs:</u>	<u>Midpoint</u>
<u>Activity</u>	<u>Cost (\$1000) *</u>
Administrative	\$0
Environmental	\$0
Rights-of-Way	\$0
Design	\$103
Construction Management	\$0
Construction	\$0
Award Amount	\$0
Change Orders	\$0
Total \$	\$103

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

**US Army Corp of Engineers
Feasibility Study**

Project Number:
860X

Project Status:
Planning, Design

Project Description:
This project will focus on water resource problems and solutions along the Lower Las Vegas Wash. The Reconnaissance Phase of this investigation was completed August 1997. This feasibility study will complete the assessment of Federal interest. Work under the project is expected to commence in FY 04-05 and require a budget of \$1,627 thousand.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation to water and wastewater projects.

Project Schedule		
<u>Activity</u>	<u>Date</u>	
Prelim. Design Complete	08/97	A
Design Start	02/04	
Design Complete	02/06	
Advertise for Bids		
Bid Opening		
Contract Award		
Construction NTP		
Substantial Completion		
Final Completion		

Project Costs:		
<u>Activity</u>	<u>Midpoint</u>	
	<u>Cost (\$1000)</u>	*
Administrative	\$0	
Environmental	\$0	
Rights-of-Way	\$0	
Design	\$1,627	
Construction Management	\$0	
Construction	\$0	
Award Amount	\$0	
Change Orders	\$0	
Total \$	\$1,627	

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

2004 Haul Contract

Project Number:
860E

Project Status:
Materials Supply

Project Description:
This on-call project focuses on the acquisition and delivery of rock rip rap and concrete debris, when available, for use in erosion control projects in the Wash. Funding for this project is programmed for FY 03-04. The Project Work Plan includes approximately \$796 thousand for this project. Supplier will be responsible for loading; hauling and delivering requested materials to strategic stockpile locations near the Wash.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

<u>Project Schedule</u>	<u>Date</u>
Activity	
Prelim. Design Complete	
Design Start	
Design Complete	
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	01/04
Substantial Completion	
Final Completion	12/04

<u>Project Costs:</u>	<u>Midpoint</u>
Activity	Cost (\$1000) *
Administrative	\$0
Environmental	\$1
Rights-of-Way	\$0
Design	\$0
Construction Management	\$72
Construction	\$723
Award Amount	\$0
Change Orders	\$0
Total \$	\$796

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title: BuRec Equipment Reimbursement	Project Number: 860V
Project Status: Construction	

Project Description:
 A contract approved by the SNWA Board of Directors in August 2003, allows SNWA to reimburse the Bureau of Reclamation for the cost of construction equipment rental used for construction in the Las Vegas Wash. Funding for this project is programmed for FY 03-04 through FY04-05. Approximately \$380 thousand has been included in the Project Work Plan for FY 03-04 and \$90 thousand for FY04-05. This project will serve to extend the available Federal funding from the Bureau of Reclamation to construct erosion control facilities in the Las Vegas Wash.

Funding Sources:
 Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">Project Schedule</th> </tr> <tr> <th style="text-align: left;"><u>Activity</u></th> <th style="text-align: left;"><u>Date</u></th> </tr> <tr> <td>Prelim. Design Complete</td> <td></td> </tr> <tr> <td>Design Start</td> <td></td> </tr> <tr> <td>Design Complete</td> <td></td> </tr> <tr> <td>Advertise for Bids</td> <td></td> </tr> <tr> <td>Bid Opening</td> <td></td> </tr> <tr> <td>Contract Award</td> <td></td> </tr> <tr> <td>Construction NTP</td> <td>04/04</td> </tr> <tr> <td>Substantial Completion</td> <td></td> </tr> <tr> <td>Final Completion</td> <td>05/04</td> </tr> </table>	Project Schedule		<u>Activity</u>	<u>Date</u>	Prelim. Design Complete		Design Start		Design Complete		Advertise for Bids		Bid Opening		Contract Award		Construction NTP	04/04	Substantial Completion		Final Completion	05/04	<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">Project Costs:</th> <th style="text-align: left;">Midpoint</th> </tr> <tr> <th style="text-align: left;"><u>Activity</u></th> <th style="text-align: left;"><u>Cost (\$1000)</u></th> <th style="text-align: left;">*</th> </tr> <tr> <td>Administrative</td> <td>\$0</td> <td></td> </tr> <tr> <td>Environmental</td> <td>\$0</td> <td></td> </tr> <tr> <td>Rights-of-Way</td> <td>\$0</td> <td></td> </tr> <tr> <td>Design</td> <td>\$0</td> <td></td> </tr> <tr> <td>Construction Management</td> <td>\$0</td> <td></td> </tr> <tr> <td>Construction</td> <td>\$470</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Award Amount</td> <td>\$0</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Change Orders</td> <td>\$0</td> <td></td> </tr> <tr> <td style="text-align: right;">Total \$</td> <td>\$470</td> <td></td> </tr> </table>	Project Costs:		Midpoint	<u>Activity</u>	<u>Cost (\$1000)</u>	*	Administrative	\$0		Environmental	\$0		Rights-of-Way	\$0		Design	\$0		Construction Management	\$0		Construction	\$470		Award Amount	\$0		Change Orders	\$0		Total \$	\$470	
Project Schedule																																																								
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Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

2005 Topographic Remapping

Project Number:
860M

Project Status:
Design Study

Project Description:
This project provides for updating topographic mapping information for the Wash from Lake Las Vegas Intake to the City of Las Vegas wastewater outfall. Flood damages and construction activities modify topography over time. The remapping program allows up-to-date mapping to be available for ongoing construction and maintenance activities. Remapping activities are scheduled for FY04-05. Approximately \$138 thousand has been programmed in the Project Work Plan for this effort.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation to water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	
Design Start	03/05
Design Complete	05/05
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	
Substantial Completion	
Final Completion	

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$0
Rights-of-Way		\$0
Design		\$138
Construction Management		\$0
Construction		\$0
Award Amount		\$0
Change Orders		\$0
Total \$		\$138

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

2005 Haul Contract

Project Number:
860F

Project Status:
Materials Supply

Project Description:
This on-call project focuses on the acquisition and delivery of rock rip rap and concrete debris, when available, for use in erosion control projects in the Wash. Funding for this project is programmed for FY 04–05. The Project Work Plan includes approximately \$828 thousand for this project. Supplier will be responsible for loading; hauling and delivering requested materials to strategic stockpile locations near the Wash.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation for water and wastewater projects.

<u>Project Schedule</u>	<u>Date</u>
Activity	
Prelim. Design Complete	
Design Start	
Design Complete	
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	01/05
Substantial Completion	
Final Completion	12/05

<u>Project Costs:</u>	<u>Midpoint</u>
Activity	Cost (\$1000) *
Administrative	\$0
Environmental	\$1
Rights-of-Way	\$0
Design	\$0
Construction Management	\$75
Construction	\$752
Award Amount	\$0
Change Orders	\$0
Total \$	\$828

Project Dates and Costs are projected unless indicated by an “A” for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

2004 Emergency Repair Allocation

Project Number:
8600

Project Status:
Construction

Project Description:
This 2003-05 Work Plan anticipates the construction of four new weir structures, bringing a total of 10 weir structures in place in the Las Vegas Wash. Similarly, over four miles of bank protection will have been installed as well. It is anticipated that storm runoff events occurring in the Las Vegas Wash may have the potential to periodically cause erosion and scour damage requiring construction repair costing in excess of available maintenance funds for Las Vegas Wash facilities. Funds under this project, totaling \$208 thousand, will be allocated under this Work Plan and will be set aside for use in repair reconstruction activities, should the need arise.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation to water and wastewater projects.

Project Schedule	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	
Design Start	
Design Complete	
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	02/04
Substantial Completion	
Final Completion	05/04

Project Costs:		Midpoint
<u>Activity</u>		<u>Cost (\$1000)</u> *
Administrative		\$0
Environmental		\$0
Rights-of-Way		\$0
Design		\$0
Construction Management		\$0
Construction		\$104
Award Amount		\$0
Change Orders		\$0
Total \$		\$104

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

2003 Las Vegas Wash Capital Improvements Plan Work Plan Project Descriptions

Project Title:

Haul Road Construction

Project Number:
860U

Project Status:
Planning, Design, Construction

Project Description:
This project will provide access to future erosion control facilities. Work under the project is expected to commence in FY 04-05 and require a budget of \$571 thousand.

Funding Sources:
Inter-account loan repaid by Las Vegas Wash share of the quarter cent sales tax revenue allocation to water and wastewater projects.

<u>Project Schedule</u>	
<u>Activity</u>	<u>Date</u>
Prelim. Design Complete	
Design Start	
Design Complete	
Advertise for Bids	
Bid Opening	
Contract Award	
Construction NTP	07/04
Substantial Completion	
Final Completion	10/04

<u>Project Costs:</u>	<u>Midpoint</u>
<u>Activity</u>	<u>Cost (\$1000) *</u>
Administrative	\$0
Environmental	\$0
Rights-of-Way	\$0
Design	\$0
Construction Management	\$0
Construction	\$571
Award Amount	\$0
Change Orders	\$0
Total \$	\$571

Project Dates and Costs are projected unless indicated by an "A" for Actual

Remarks:

Appendix C – Candidate Projects

2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
GRADE CONTROL FACILITIES

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Construction Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Grade Control Structures											
810R	W 5.1	14	Landfill Weir	Feb-04	2003-04	32,453	324,527	227,169	3,245,269	3,829,418	3,919,064
810F	W 9.6	6	Upper Diversion Weir	Feb-05	2004-05	68,704	687,043	480,930	6,870,425	8,107,102	8,671,199
810P	W 3.3	7	Powerline Crossing Weir	Sep-04	2004-05	56,937	569,366	398,556	5,693,660	6,718,519	7,076,859
810K	W 3.9	3	Demonstration Repl. Weir	Oct-05	2005-06	79,133	791,332	553,932	7,913,321	9,337,718	10,229,021
810V	W 8.5	13	DU Wetlands No. 1 Weir	Jan-06	2005-06	23,896	238,960	167,272	2,389,598	2,819,726	3,104,915
810Y	W 8.8	15	DU Wetlands No. 2 Weir	Jan-06	2005-06	25,352	253,523	177,466	2,535,232	2,991,573	3,295,077
810G	W 7.7	8	Duck Creek Confl. Weir	Dec-06	2006-07	85,000	850,000	595,000	8,500,000	10,030,000	11,570,316
810X	W 7.3	16	Upper Narrows Weir	Dec-06	2006-07	25,144	251,444	176,011	2,514,443	2,967,042	3,394,214
810W	W 7.1	20	Sunrise Mtn Outfall Weir	Dec-06	2006-07	22,131	221,306	154,914	2,213,055	2,611,406	2,983,351
810M	W 4.7	9	Lower Narrows Weir	Feb-08	2007-08	55,984	559,837	391,886	5,598,371	6,606,078	7,955,761
810L	W 4.2	10	Homestead Weir	Dec-07	2007-08	25,971	259,710	181,797	2,597,099	3,064,577	3,641,608
810Q	W 4.5	18	Wells Weir	Dec-07	2007-08	30,899	308,989	216,292	3,089,889	3,646,069	4,331,870
810U	W 8.2	17	Silverbowl Weir	Dec-08	2008-09	28,267	282,674	197,872	2,826,744	3,335,557	4,120,766
810S	W 9.0	21	Tropicana Outfall Weir	Jun-08	2008-09	26,901	269,008	188,305	2,690,076	3,174,290	3,872,549
810T	W 9.2	22	D-14 Extension Weir	Jan-09	2008-09	15,950	159,500	111,650	1,595,002	1,882,102	2,355,667
Total, Grade Control Structures:						\$602,722	\$6,027,219	\$4,219,052	\$60,272,184	\$71,121,177	\$80,522,237
Grade Control Structures Funded By Other Sources											
810N	W 3.5	2	Rainbow Gardens Weir	Jul-03	2003-04	65,921	659,212	461,448	6,592,119	7,778,700	

2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
BANK PROTECTION FACILITIES

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Program Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Bank Protection Facilities											
830E	BP5.4N	5	Bostick BP - N	Feb-04	2003-04	\$2,000	7,800	7,800	260,000	277,600	293,217
840E	BP5.4S	2	Bostick BP - S	Feb-05	2004-05	\$2,000	9,840	9,840	328,000	349,680	383,138
830B	BP3.9N	26	Demonstration BP - N	Feb-05	2004-05	\$2,000	3,360	3,360	112,000	120,720	133,772
840D	BP6.7S	28	Pabco Road BP - S	Feb-05	2004-05	\$2,000	6,848	6,848	228,267	243,963	268,257
840P	BP3.3S	14	Powerline BP - S	Feb-06	2005-06	\$2,000	6,160	6,160	205,333	219,653	251,199
830P	BP3.3N	20	Powerline BP - N	Feb-06	2005-06	\$2,000	3,760	3,760	125,333	134,853	155,020
840F	BP9.6S	23	Upper Diversion BP - S	Feb-06	2005-06	\$2,000	5,840	5,840	194,667	208,347	238,707
830R	BP5.1N	24	Landfill BP - N	Feb-06	2005-06	\$2,000	5,392	5,392	179,733	192,517	220,735
830F	BP9.6N	25	Upper Diversion BP - N	Feb-06	2005-06	\$2,000	2,872	2,872	95,733	103,477	119,642
840Y	BP8.8S	21	DU Wetlands 2 BP - S	Feb-07	2006-07	\$2,000	4,104	4,104	136,800	147,008	175,956
830V	BP8.5N	34	DU Wetlands 1 BP - N	Feb-07	2006-07	\$2,000	8,960	8,960	298,667	318,587	378,565
830Y	BP8.8N	39	DU Wetlands 2 BP - N	Feb-07	2006-07	\$2,000	5,056	5,056	168,533	180,645	215,622
840G	BP7.7S	13	Duck Creek BP - S	Feb-08	2007-08	\$2,000	14,460	14,460	482,000	512,920	632,474
830G	BP7.7N	22	Duck Creek BP - N	Feb-08	2007-08	\$2,000	7,980	7,980	266,000	283,960	351,000
830X	BP7.3N	42	Upper Narrows BP - N	Feb-08	2007-08	\$2,000	5,784	5,784	192,800	206,368	255,836

2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
BANK PROTECTION FACILITIES

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Program Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Bank Protection Facilities											
840L	BP4.2S	16	Homestead BP - S	Feb-09	2008-09	\$2,000	3,300	3,300	110,000	118,600	152,697
840M	BP4.7S	18	Lower Narrows BP - S	Feb-09	2008-09	\$2,000	3,264	3,264	108,800	117,328	151,173
830D	BP6.7N	30	Pabco Road BP - N	Feb-09	2008-09	\$2,000	6,792	6,792	226,400	241,984	309,651
830Q	BP4.5N	31	Wells BP - N	Feb-09	2008-09	\$2,000	5,040	5,040	168,000	180,080	230,944
830A	BP3.0N	32	Fire Station BP - N	Feb-10	2009-10	\$2,000	3,516	3,516	117,200	126,232	168,993
840A	BP3.0S	35	Fire Station BP - S	Feb-10	2009-10	\$2,000	4,960	4,960	165,333	177,253	236,458
840U	BP8.2S	33	Silverbowl BP - S	Feb-10	2009-10	\$2,000	5,840	5,840	194,667	208,347	277,906
840S	BP9.0S	36	Tropicana Outfall BP - S	Feb-10	2009-10	\$2,000	5,920	5,920	197,333	211,173	281,647
840W	BP7.1S	37	Sunrise Mountain BP - S	Feb-10	2009-10	\$2,000	6,736	6,736	224,533	240,005	319,808
830U	BP8.2N	41	Silverbowl BP - N	Feb-10	2009-10	\$2,000	2,144	2,144	71,467	77,755	105,295
830S	BP9.0N	43	Tropicana Outfall BP - N	Feb-10	2009-10	\$2,000	4,552	4,552	151,733	162,837	217,965
830W	BP7.1N	44	Sunrise Mountain BP - N	Feb-10	2009-10	\$2,000	2,480	2,480	82,667	89,627	120,977
Total, Bank Protection Facilities:						\$54,000	\$152,760	\$152,760	\$5,091,999	\$5,451,519	\$6,646,654

**2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
REVEGETATION PROGRAMS**

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Program Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Revegetation Programs											
870E	RV5.4N	1	Bostick Reveg. - N	Nov-03	2003-04	\$1,000	0	31,500	105,000	137,500	138,708
880E	RV5.4S	2	Bostick Reveg. - S	Nov-03	2003-04	\$1,000	0	26,250	87,500	114,750	115,757
870A	RV3.0N	3	Fire Station Reveg. - N	Nov-03	2003-04	\$1,000	0	10,500	35,000	46,500	46,890
880A	RV3.0S	4	Fire Station Reveg. - S	Nov-03	2003-04	\$1,000	0	10,500	35,000	46,500	46,890
870D	RV6.7N	5	Pabco Reveg. - N	Nov-03	2003-04	\$1,000	0	21,000	70,000	92,000	92,781
870R	RV5.1N	6	Landfill Reveg. - N	Nov-04	2004-05	\$1,000	0	10,500	35,000	46,500	48,789
880R	RV5.1S	7	Landfill Reveg. - S	Nov-04	2004-05	\$1,000	0	10,500	35,000	46,500	48,789
870N	RV3.5N	8	Rainbow Gardens Reveg. - N	Nov-04	2004-05	\$1,000	0	31,500	105,000	137,500	144,272
880N	RV3.5S	9	Rainbow Gardens Reveg. - S	Nov-04	2004-05	\$1,000	0	26,250	87,500	114,750	120,400
870B	RV3.9N	10	Demonstration Reveg. - N	Nov-05	2004-05	\$1,000	0	10,500	35,000	46,500	50,664
870P	RV3.3N	11	Powerline Reveg. - N	Nov-05	2004-05	\$1,000	0	15,750	52,500	69,250	75,477
880P	RV3.3S	12	Powerline Reveg. - S	Nov-05	2004-05	\$1,000	0	15,750	52,500	69,250	75,477
870F	RV9.6N	13	Upper Diversion Reveg. - N	Nov-05	2005-06	\$1,000	0	31,500	105,000	137,500	150,058
880F	RV9.6S	14	Upper Diversion Reveg. - S	Nov-05	2005-06	\$1,000	0	47,250	157,500	205,750	224,547
870L	RV4.2N	15	Homestead Reveg. - N	Nov-06	2006-07	\$1,000	0	21,000	70,000	92,000	104,415
880L	RV4.2S	16	Homestead Reveg. - S	Nov-06	2006-07	\$1,000	0	26,250	87,500	114,750	130,237
870U	RV8.2N	17	Silverbowl Reveg. -N	Nov-06	2006-07	\$1,000	0	21,000	70,000	92,000	104,415
880U	RV8.2S	18	Silverbowl Reveg. - S	Nov-06	2006-07	\$1,000	0	21,000	70,000	92,000	104,415

2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
REVEGETATION PROGRAMS

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Program Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Revegetation Programs											
870M	RV4.7N	19	Lower Narrows Reveg. - N	Nov-06	2006-07	\$1,000	0	27,000	90,000	118,000	133,848
880M	RV4.7S	20	Lower Narrows Reveg. - S	Nov-06	2006-07	\$1,000	0	31,500	105,000	137,500	155,969
870Q	RV4.5N	21	Wells Reveg. - N	Nov-07	2007-08	\$1,000	0	9,000	30,000	40,000	47,180
880Q	RV4.5S	22	Wells Reveg. - S	Nov-07	2007-08	\$1,000	0	9,000	30,000	40,000	47,180
870G	RV7.7N	23	Duck Creek Reveg. - N	Nov-07	2007-08	\$1,000	0	22,500	75,000	98,500	116,196
880G	RV7.7S	24	Duck Creek Reveg. - S	Nov-07	2007-08	\$1,000	0	22,500	75,000	98,500	116,196
870Y	RV8.8N	25	DU Wetlands 2 Reveg. - N	Nov-08	2008-09	\$1,000	0	13,500	45,000	59,500	73,001
880Y	RV8.8S	26	DU Wetlands 2 Reveg. - S	Nov-08	2008-09	\$1,000	0	13,500	45,000	59,500	73,001
870V	RV8.5N	27	DU Wetlands 1 Reveg. - N	Nov-08	2008-09	\$1,000	0	13,500	45,000	59,500	73,001
880V	RV8.5S	28	DU Wetlands 1 Reveg. - S	Nov-08	2008-09	\$1,000	0	13,500	45,000	59,500	73,001
870X	RV7.3N	29	Upper Narrows Reveg. - N	Nov-09	2009-10	\$1,000	0	9,000	30,000	40,000	51,036
880X	RV7.3S	30	Upper Narrows Reveg. - S	Nov-09	2009-10	\$1,000	0	13,500	45,000	59,500	75,921
870W	RV7.1N	31	Sunrise Mountain Reveg. - N	Nov-09	2009-10	\$1,000	0	9,000	30,000	40,000	51,036
880W	RV7.1S	32	Sunrise Mountain Reveg. - S	Nov-09	2009-10	\$1,000	0	13,500	45,000	59,500	75,921
870S	RV9.0N	33	Tropicana Outfall Reveg. - N	Nov-09	2009-10	\$1,000	0	4,500	15,000	20,500	26,150
880S	RV9.0S	34	Tropicana Outfall Reveg. - S	Nov-09	2009-10	\$1,000	0	4,500	15,000	20,500	26,150
870T	RV9.2N	35	D 14 Extension Reveg. - N	Nov-09	2009-10	\$1,000	0	4,500	15,000	20,500	26,150
880T	RV9.2S	36	D 14 Extension Reveg. - S	Nov-09	2009-10	\$1,000	0	4,500	15,000	20,500	26,150
Total, Revegetation Programs						\$36,000	\$0	\$627,000	\$2,090,000	\$2,753,000	\$3,090,068

2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
DESIGN STUDIES AND MISCELLANEOUS PROGRAMS

Proj. #	Location #	Priority	Task	Estimated Const. Start	Const. Budget Year	Permitting & Analysis (\$)	Design Activities (\$)	Program Management (\$)	Construction & Materials (\$)	Total Present Cost (\$)	Total Mid-point Cost (\$)
Matrl. Hauling/Dust Control/Equip. Rental Contracts											
860E			2004 Haul Contract	Jan-04	2003-04	\$1,000	0	70,000	700,000	771,000	796,277
860F			2005 Haul Contract	Jan-05	2004-05	\$1,000	0	70,000	700,000	771,000	828,172
860G			2006 Haul Contract	Jan-06	2005-06	\$1,000	0	70,000	700,000	771,000	861,299
860H			2007 Haul Contract	Jan-07	2006-07	\$1,000	0	70,000	700,000	771,000	895,752
860J			2008 Haul Contract	Jan-08	2007-08	\$1,000	0	70,000	700,000	771,000	931,631
860K			2009 Haul Contract	Jan-09	2008-09	\$1,000	0	70,000	700,000	771,000	968,948
860V			BOR Equipment Rental	Jan-03	2003-04				470,000	470,000	470,000
Topographic Remapping Projects											
860M			2005 Remapping	Jan-00	2004-05		130,000			130,000	138,263
860N			2008 Remapping	Jan-00	2007-08		140,000			140,000	167,509
Emergency Repair Programs											
860O			2004 Repair Allocation	Jul-04	2004-05				100,000	100,000	103,621
860P			2005 Repair Allocation	Jul-05	2005-06				100,000	100,000	107,766
860Q			2006 Repair Allocation	Jul-06	2006-07				100,000	100,000	112,076
860W			2007 Repair Allocation	Jul-07	2007-08				100,000	100,000	116,559
860R			2008 Repair Allocation	Jul-08	2008-09				100,000	100,000	121,235
Design Studies and Evaluations											
860T			Sediment Study II	Jan-00	2003-04		100,000			100,000	103,110
860U			Haul Road Construct.	Jul-04	2004-05				550,000	550,000	570,833
860X			COE Feasibility Study	Jan-00	2004-06		\$ 1,500,000			1,500,000	1,627,114
Total, Studies and Misc. Programs:						\$6,000	\$1,870,000	\$420,000	\$5,720,000	\$8,016,000	\$8,920,165

**2003 Las Vegas Wash Capital Improvements Plan
CANDIDATE PROJECTS
COST SUMMARY**

	Permitting & Analysis	Design Activities	Program Management	Construction & Materials	Total Present Cost	Total Midpoint Cost
Gradient Control Structures	\$602,722	\$6,027,219	\$4,219,052	\$60,272,184	\$71,121,177	\$80,522,237
Bank Protection Facilities	\$54,000	\$152,760	\$152,760	\$5,091,999	\$5,451,519	\$6,646,654
Revegetation Activities	\$36,000	\$0	\$627,000	\$2,090,000	\$2,753,000	\$3,090,068
Design Studies and Miscellaneous Programs	\$6,000	\$1,870,000	\$420,000	\$5,720,000	\$8,016,000	\$8,920,165
Total Planned Capital Improvements	\$698,722	\$8,049,979	\$5,418,812	\$73,174,183	\$87,341,696	\$99,179,124

Appendix D – Construction Program Master Plan

2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
GRADIENT CONTROL FACILITIES

Proj. Number	Site No.	Weir Str. Name	Projected Const. Start	Const. Budget Year	Annual Budget (Midpoint \$)							
					2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)
Grade Control Structures												
810R	W 5.1	Landfill Weir	Feb-04	2003-04		3,919,064						
810F	W 9.6	Upper Diversion Weir	Feb-05	2004-05		775,740	7,895,459					
810P	W 3.3	Powerline Crossing Weir	Sep-04	2004-05		636,274	6,440,585					
810K	W 3.9	Demonstration Repl. Weir	Oct-05	2005-06		891,479		9,337,542				
810V	W 8.5	DU Wetlands No. 1 Weir	Jan-06	2005-06			280,542	2,824,373				
810Y	W 8.8	DU Wetlands No. 2 Weir	Jan-06	2005-06			297,607	2,997,470				
810G	W 7.7	Duck Creek Confl. Weir	Dec-06	2006-07				1,037,381	10,532,935			
810X	W 7.3	Upper Narrows Weir	Dec-06	2006-07				306,890	3,087,324			
810W	W 7.1	Sunrise Mtn Outfall Weir	Dec-06	2006-07				270,166	2,713,185			
810M	W 4.7	Lower Narrows Weir	Feb-08	2007-08					717,257	7,238,504		
810L	W 4.2	Homestead Weir	Dec-07	2007-08					329,694	3,311,914		
810Q	W 4.5	Wells Weir	Dec-07	2007-08					392,168	3,939,702		
810U	W 8.2	Silverbowl Weir	Dec-08	2008-09						373,220	3,747,546	
810S	W 9.0	Tropicana Outfall Weir	Jun-08	2008-09						349,611	3,522,938	
810T	W 9.2	D-14 Extension Weir	Jan-09	2008-09						209,970	2,145,697	
Total, Grade Control Structures:						\$6,222,557	\$14,914,193	\$16,773,822	\$17,772,563	\$15,422,921	\$9,416,181	
Accumulated Total:						\$6,222,557	\$21,136,750	\$37,910,572	\$55,683,135	\$71,106,056	\$80,522,237	

2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
BANK PROTECTION FACILITIES

Proj. Number	Site No.	Weir Str. Name	Projected Const. Start	Const. Budget Year	Annual Budget (Midpoint \$)							
					2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)
Bank Protection Facilities												
830E	BP5.4N	Bostick BP - N	Feb-04	2003-04		293,217						
840E	BP5.4S	Bostick BP - S	Feb-05	2004-05			383,138					
830B	BP3.9N	Demonstration BP - N	Feb-05	2004-05			133,772					
840D	BP6.7S	Pabco Road BP - S	Feb-05	2004-05			268,257					
840P	BP3.3S	Powerline BP - S	Feb-06	2005-06				251,199				
830P	BP3.3N	Powerline BP - N	Feb-06	2005-06				155,020				
840F	BP9.6S	Upper Diversion BP - S	Feb-06	2005-06				238,707				
830R	BP5.1N	Landfill BP - N	Feb-06	2005-06				220,735				
830F	BP9.6N	Upper Diversion BP - N	Feb-06	2005-06				119,642				
840Y	BP8.8S	DU Wetlands 2 BP - S	Feb-07	2006-07					175,956			
830V	BP8.5N	DU Wetlands 1 BP - N	Feb-07	2006-07					378,565			
830Y	BP8.8N	DU Wetlands 2 BP - N	Feb-07	2006-07					215,622			
840G	BP7.7S	Duck Creek BP - S	Feb-08	2007-08						632,474		
830G	BP7.7N	Duck Creek BP - N	Feb-08	2007-08						351,000		
830X	BP7.3N	Upper Narrows BP - N	Feb-08	2007-08						255,836		

2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
BANK PROTECTION FACILITIES

Proj. Number	Site No.	Weir Str. Name	Projected Const. Start	Const. Budget Year	Annual Budget (Midpoint \$)							
					2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)
Bank Protection Facilities												
840L	BP4.2S	Homestead BP - S	Feb-09	2008-09								152,697
840M	BP4.7S	Lower Narrows BP - S	Feb-09	2008-09								151,173
830D	BP6.7N	Pabco Road BP - N	Feb-09	2008-09								309,651
830Q	BP4.5N	Wells BP - N	Feb-09	2008-09								230,944
830A	BP3.0N	Fire Station BP - N	Feb-10	2009-10								168,993
840A	BP3.0S	Fire Station BP - S	Feb-10	2009-10								236,458
840U	BP8.2S	Silverbowl BP - S	Feb-10	2009-10								277,906
840S	BP9.0S	Tropicana Outfall BP - S	Feb-10	2009-10								281,647
840W	BP7.1S	Sunrise Mountain BP - S	Feb-10	2009-10								319,808
830U	BP8.2N	Silverbowl BP - N	Feb-10	2009-10								105,295
830S	BP9.0N	Tropicana Outfall BP - N	Feb-10	2009-10								217,965
830W	BP7.1N	Sunrise Mountain BP - N	Feb-10	2009-10								120,977
Total, Bank Protection Facilities:						\$293,217	\$785,167	\$985,303	\$770,143	\$1,239,310	\$844,465	\$1,729,049
Accumulated Total:						\$293,217	\$1,078,384	\$2,063,687	\$2,833,830	\$4,073,140	\$4,917,605	\$6,646,654

2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
REVEGETATION PROGRAMS

Proj. Number	Site No.	Weir Str. Name	Projected Const. Start	Const. Budget Year	Annual Budget (Midpoint \$)							
					2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)
Revegetation Programs												
870E	RV5.4N	Bostick Reveg. - N	Nov-03	2003-04		138,708						
880E	RV5.4S	Bostick Reveg. - S	Nov-03	2003-04		115,757						
870A	RV3.0N	Fire Station Reveg. - N	Nov-03	2003-04		46,890						
880A	RV3.0S	Fire Station Reveg. - S	Nov-03	2003-04		46,890						
870D	RV6.7N	Pabco Reveg. - N	Nov-03	2003-04		92,781						
870R	RV5.1N	Landfill Reveg. - N	Nov-04	2004-05			48,789					
880R	RV5.1S	Landfill Reveg. - S	Nov-04	2004-05			48,789					
870N	RV3.5N	Rainbow Gardens Reveg. - N	Nov-04	2004-05			144,272					
880N	RV3.5S	Rainbow Gardens Reveg. - S	Nov-04	2004-05			120,400					
870B	RV3.9N	Demonstration Reveg. - N	Nov-05	2004-05			50,664					
870P	RV3.3N	Powerline Reveg. - N	Nov-05	2004-05			75,477					
880P	RV3.3S	Powerline Reveg. - S	Nov-05	2004-05			75,477					
870F	RV9.6N	Upper Diversion Reveg. - N	Nov-05	2005-06				150,058				
880F	RV9.6S	Upper Diversion Reveg. - S	Nov-05	2005-06				224,547				
870L	RV4.2N	Homestead Reveg. - N	Nov-06	2006-07					104,415			
880L	RV4.2S	Homestead Reveg. - S	Nov-06	2006-07					130,237			
870U	RV8.2N	Silverbowl Reveg. -N	Nov-06	2006-07					104,415			
880U	RV8.2S	Silverbowl Reveg. - S	Nov-06	2006-07					104,415			

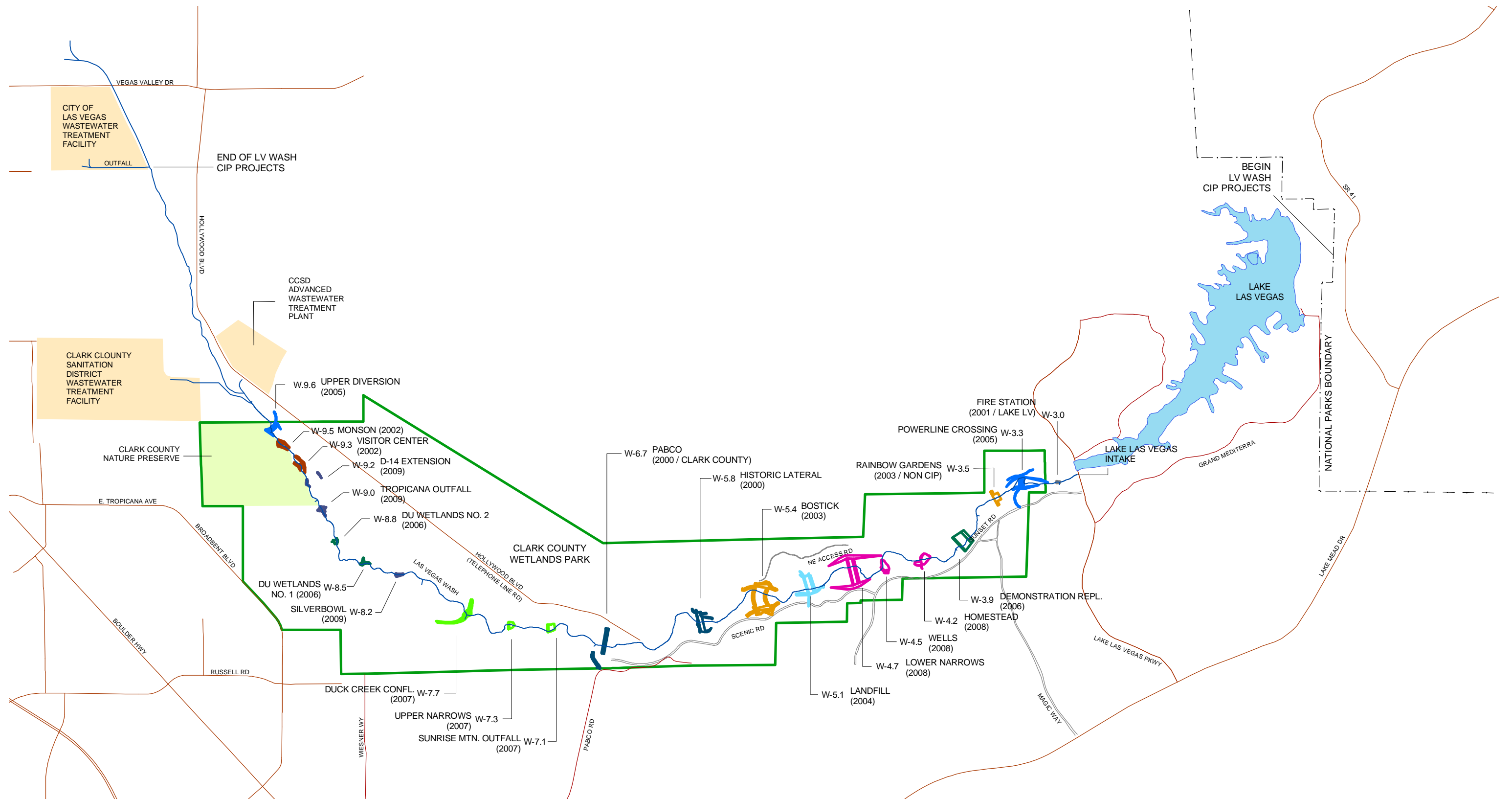
2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
REVEGETATION PROGRAMS

Proj. Number	Site No.	Weir Str. Name	Projected Const. Start	Const. Budget Year	Annual Budget (Midpoint \$)							
					2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)
Revegetation Programs												
870M	RV4.7N	Lower Narrows Reveg. - N	Nov-06	2006-07					133,848			
880M	RV4.7S	Lower Narrows Reveg. - S	Nov-06	2006-07					155,969			
870Q	RV4.5N	Wells Reveg. - N	Nov-07	2007-08						47,180		
880Q	RV4.5S	Wells Reveg. - S	Nov-07	2007-08						47,180		
870G	RV7.7N	Duck Creek Reveg. - N	Nov-07	2007-08						116,196		
880G	RV7.7S	Duck Creek Reveg. - S	Nov-07	2007-08						116,196		
870Y	RV8.8N	DU Wetlands 2 Reveg. - N	Nov-08	2008-09							73,001	
880Y	RV8.8S	DU Wetlands 2 Reveg. - S	Nov-08	2008-09							73,001	
870V	RV8.5N	DU Wetlands 1 Reveg. - N	Nov-08	2008-09							73,001	
880V	RV8.5S	DU Wetlands 1 Reveg. - S	Nov-08	2008-09							73,001	
870X	RV7.3N	Upper Narrows Reveg. - N	Nov-09	2009-10								51,036
880X	RV7.3S	Upper Narrows Reveg. - S	Nov-09	2009-10								75,921
870W	RV7.1N	Sunrise Mountain Reveg. - N	Nov-09	2009-10								51,036
880W	RV7.1S	Sunrise Mountain Reveg. - S	Nov-09	2009-10								75,921
870S	RV9.0N	Tropicana Outfall Reveg. - N	Nov-09	2009-10								26,150
880S	RV9.0S	Tropicana Outfall Reveg. - S	Nov-09	2009-10								26,150
870T	RV9.2N	D 14 Extension Reveg. - N	Nov-09	2009-10								26,150
880T	RV9.2S	D 14 Extension Reveg. - S	Nov-09	2009-10								26,150
Total, Revegetation Programs						\$441,026	\$563,868	\$374,605	\$733,299	\$326,752	\$292,004	\$358,514
Accumulated Total:						\$441,026	\$1,004,894	\$1,379,499	\$2,112,798	\$2,439,550	\$2,731,554	\$3,090,068

2003 Las Vegas Wash Capital Improvements Plan
CONSTRUCTION PROGRAM BUDGET ALLOCATION
DESIGN STUDIES AND MISCELLANEOUS PROGRAMS

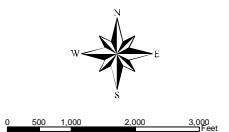
Proj. Number	Task	Task Start	Budget Year	Annual Budget (Midpoint \$)								
				2002-03 (\$)	2003-04 (\$)	2004-05 (\$)	2005-06 (\$)	2006-07 (\$)	2007-08 (\$)	2008-09 (\$)	2009-10 (\$)	
Matri. Hauling/Dust Control/Equip. Rental Contracts												
860E	2004 Haul Contract	Jan-04	2003-04		796,277							
860F	2005 Haul Contract	Jan-05	2004-05			828,172						
860G	2006 Haul Contract	Jan-06	2005-06				861,299					
860H	2007 Haul Contract	Jan-07	2006-07					895,752				
860J	2008 Haul Contract	Jan-08	2007-08						931,631			
860K	2009 Haul Contract	Jan-09	2008-09								968,948	
860V	BOR Equipment Rental	Jan-03	2003-04		380,000	90,000						
Topographic Remapping Projects												
860M	2005 Remapping	Mar-05	2004-05			138,263						
860N	2008 Remapping	Mar-08	2007-08						167,509			
Emergency Repair Programs												
860O	2004 Repair Allocation	Jul-04	2004-05			103,621						
860P	2005 Repair Allocation	Jul-05	2005-06				107,766					
860Q	2006 Repair Allocation	Jul-06	2006-07					112,076				
860W	2007 Repair Allocation	Jul-07	2007-08						116,559			
860R	2008 Repair Allocation	Jul-08	2008-09								121,235	
Design Studies and Evaluations												
860T	Sediment Study II	Mar-04	2003-04		103,110							
860U	Haul Road Construct.	Jul-04	2004-05			570,833						
860X	COE Feasibility Study	Oct-04	2004-06			1,627,114						
Total, Studies and Misc. Programs:					\$1,279,387	\$3,358,003	\$969,065	\$1,007,828	\$1,215,699	\$1,090,183		
Accumulated Total:					\$1,279,387	\$4,637,390	\$5,606,455	\$6,614,283	\$7,829,982	\$8,920,165		

Appendix E – Location Map



SNWA LAS VEGAS WASH CAPITAL IMPROVEMENTS PLAN, GRADE CONTROL STRUCTURES

Project Construction Completion Year



1 Inch = 3000 Feet

FIGURE: WFE-010

28 AUG 2003

Appendix F – Ranking Criteria Scoring

2003 Las Vegas Wash Capital Improvements Plan RANKING CRITERIA SCORING Channel Bed Stabilization

Factor	Criteria	Score	Criteria Score																					
			Historic Lateral	Pabco Road	Rainbow Gardens	Powerline Crossing	Bostick	Duck Creek	Demonstration	Upper Diversion	Visitor Center	Monson	Homestead	Lower Narrows	Landfill	Fire Station	DU Wetlands 1	DU Wetlands 2	Silverbow	Tropicana Outfall	Sunrise Mountain	Upper Narrows	Wells	D14 Extension
Upstream	Active headcutting risking upstream channel, structures, or banks	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Stability	Moderate headcutting in silty or sandy channel bed, some bank stability threat	3						3			3	3			3	3	3	3		3	3			
	Slow headcutting in caliche or bedrock, little bank stability threat	1																	1				1	
System	Provides important foundation or stability support for other facilities	5	5	5	5	5	5	5	5	5				5	5	5						5		
Relationship	Provides moderate foundation or stability support to other Wash features	3									3	3	3	3			3	3	3	3		3	3	
	Provides minor or no foundation or stability support to other facilities	1																						
Cost	Will reduce capital cost of other facilities or is a low maintenance facility	5	5	5	5	5	5	5	5	5						5						5		
Avoidance	Provides minor capital cost savings for other facilities or minor annual maintenance expected	3						3			3	3	3	3	3								3	
	Provides no reduction in capital cost for other facilities, high maintenance expected	1													1									
Water	Provides large volume for sediment capture or 5 or more acres potential wetlands area	5	5		5		5	5	5				5	5										
Quality	Provides minor volume of sediment capture or 3 or more acres potential wetlands area	3		3		3				3							3	3	3	3	3			
	Provides little or no volume for sediment capture or less than 1 acre of potential wetlands area	1									1	1		1	1	1						1	1	
Ecosystem	Provides platform for ecosystem enhancement covering greater than 5 acres	5	5	5	5		5	5	5				5											
Enhancement	Provides platform for ecosystem enhancement covering greater than 3 acres	3				3				3			3		3									
	Provides platform for ecosystem enhancement covering 1 acre or more	1									1	1		1	1	1	1	1	1	1	1	1	1	
Recreational	Directly reduces threat to recreational features	5				5		5	5	5	5													
Opportunities	Provides possible threat reduction to recreational features	3	3	3	3		3		3				3	3			3	3	3	3		3	3	
	Provides little or no threat reduction to recreational features	1												1	1					1		1		
Public	Is strongly beneficial to public safety associated with activities in the Wash	5		5					5	5	5	5												
Safety	Provides some improvement to public safety associated with activities in the Wash	3	3		3	3	3	3					3	3	3		3	3	3	3	3		3	
	Provides little improvement to public safety associated with activities in the Wash	1													1							1		
Permitting	Relatively minor permitting issues to be resolved	5					5				5	5		5	5	5	5				5	5		
	Wetlands, WQ, Wildlife, or Archeological issues exist and clearance required	3	3		3			3	3	3			3	3				3		3			3	
	A sensitive site requiring mitigation or high level of protection	1		1		1													1					
ROW &	Local Government Ownership, relatively easy acquisition	5	5	5	5	5	5	5	5	5	5	5	5	5					5				5	
Access	Federal Ownership, requiring federal review and approval	3												3		3	3				3	3		
	Private Ownership requiring extended negotiations	1													1			1					1	
Other	other local, state, or federal funding assistance for > 50% of project cost	5	5	5	5						5	5			5						5			
Funding	Identified possibility for additional local, state, federal funding assistance for > 25% of project	3				3		3		3							3	3	3					
	No additional funding assistance identified beyond local sales tax revenues or < 25% project	1					1		1				1	1	1				1	1		1	1	

2003 Las Vegas Wash Capital Improvements Plan RANKING CRITERIA SCORING Bank Protection

Factor	Criteria	Score	Criteria Score																					
			Demonstration BP - S	Demonstration BP - N	Historic Lateral BP - S	Historic Lateral BP - N	Visitor Center BP - S	Visitor Center BP - N	Bostick BP-S	Bostick BP-N	Upper Diversion BP-S	Upper Diversion BP-N	Wells BP-S	Wells BP-N	Monson BP-S	Monson BP-N	Homestead BP-S	Homestead BP-N	Rainbow Gardens BP-S	Rainbow Gardens BP-N	Duck creek BP-S	Duck Creek BP-N	Fire Station BP-S	Fire Station BP-N
Bank Stability	Unstable vertical banks, > 15' high, subject to periodic failure	5	5		5	5	5		5	5			5	5			5	5	5	5	5	5		
	Moderately unstable, <15' high, subject to failure during flood events	3					3						3			3								
	Fairly stable bank, minor sloughing during flood events	1		1							1	1			1									1
System Relationship	Bank Failure will damage adjacent non recreational facilities or archaeological sites	5	5		5	5	5		5			5			5		5	5						
	Failure may damage adjacent non-recreational facilities or archaeological sites	3								3	3			3		3		3	3			3	3	
	Failure not expected to threaten adjacent non-recreational facilities	1		1				1		1			1		1							1		
Cost Avoidance	Will significantly reduce capital cost of other facilities, or is a low maintenance facility	5	5	5	5	5	5	5	5			5			5	5	5	5	5					
	Provides some capital cost savings of other facilities, or requires regular maintenance	3								3	3	3			3		3				3	3		3
	No capital cost savings to other facilities, flood damage repair maintenance expected	1											1										1	
Water Quality	Bank failure capable of discharging > 2000 CY annually	5	5		5	5	5		5	5			5				5	5	5		5			
	Bank failure capable of discharging < 2000 CY but > 300 CY annually	3		3									3	3		3		3	3		3		3	
	Bank failure capable of discharging < 300 CY annually	1						1			1	1			1									1
Ecosystem Enhancement	Provides platform for ecosystem enhancement covering greater than 5 acres	5			5	5			5	5									5	5				
	Provides platform for ecosystem enhancement covering greater than 2 acres	3	3				3						3			3	3		3	3		3		3
	Provides platform for ecosystem enhancement covering 2 acres or less	1		1				1			1	1	1		1	1							1	
Recreational Opportunities	Directly reduces threat to recreational features	5					5		5	5	5	5	5											
	Provides possible threat reduction to recreational features	3	3		3							3					3	3	3	3	3	3		
	Provides little or no threat reduction to recreational features	1		1		1		1					1		1								1	1
Public Safety	Is strongly beneficial to public safety associated with activities in the Wash	5	5	5			5		5	5	5	5	5			5	5	5	5	5				
	Provides some improvement to public safety associated with activities in the Wash	3			3	3								3	3							3	3	
	Provides little improvement to public safety associated with activities in the Wash	1						1							1									1
Permitting	Relatively minor permitting issues to be resolved	5	5	5			5	5	5	5	5	5	5	5	5	5	5	5					5	5
	Wetlands, WQ, Wildlife, or Archeological issues exist and clearance required	3			3	3														3	3	3		
	A sensitive site requiring mitigation or high level of protection	1																	1					
ROW & Access	Local Government Ownership, relatively easy acquisition	5	5	5			5	5	5	5	5	5			5	5					5	5	5	
	Federal Ownership, requiring federal review and approval	3			3	3													3	3				
	Private Ownership requiring extended negotiations	1											1	1			1	1				1		
Other Funding	other local, state, or federal funding assistance for > 50% of project cost	5	5		5	5	5	5	5															
	Identified possibility for additional local, state, federal funding assistance for > 25% of project	3									3											3	3	
	No additional funding assistance identified beyond local sales tax revenues or < 25% project	1		1								1	1	1	1	1	1	1	1	1			1	1

2003 Las Vegas Wash Capital Improvements Plan RANKING CRITERIA SCORING Bank Protection

Factor	Criteria	Score	Criteria Score																					
			Poweline BP-S	Powerline BP-N	Pabco Road BP-S	Pabco Road BP-N	Lower Narrows BP-S	Lower Narrows BP-N	Landfill BP-S	Landfill BP-N	Tropicana Outfall BP-S	Tropicana Outfall BP-N	D-14 Extension BP-S	D-14 Extension BP-N	Silverbowl BP-S	Silverbowl BP-N	DU Wetlands 1 BP-S	DU Wetlands 1 BP-N	DU Wetlands 2 BP-S	DU Wetlands 2 BP-N	Upper Narrows BP-S	Upper Narrows BP-N	Sunrise Mtn BP-S	Sunrise Mtn BP-N
Bank Stability	Unstable vertical banks, > 15' high, subject to periodic failure	5	5	5																				
	Moderately unstable, <15' high, subject to failure during flood events	3				3	3																	
	Fairly stable bank, minor sloughing during flood events	1			1						1	1	1	1								1	1	
System Relationship	Bank Failure will damage adjacent non recreational facilities or archaeological sites	5			5																			
	Failure may damage adjacent non-recreational facilities or archaeological sites	3	3	3			3	3		3		3		3		3	3	3			3			
	Failure not expected to threaten adjacent non-recreational facilities	1				1				1		1		1		1					1	1	1	1
Cost Avoidance	Will significantly reduce capital cost of other facilities, or is a low maintenance facility	5	5																					
	Provides some capital cost savings of other facilities, or requires regular maintenance	3		3	3	3	3		3															
	No capital cost savings to other facilities, flood damage repair maintenance expected	1								1	1	1	1	1	1								1	1
Water Quality	Bank failure capable of discharging > 2000 CY annually	5	5	5			5	5	5	5														
	Bank failure capable of discharging < 2000 CY but > 300 CY annually	3				3											3		3				3	
	Bank failure capable of discharging < 300 CY annually	1			1						1	1	1	1	1	1		1			1		1	1
Ecosystem Enhancement	Provides platform for ecosystem enhancement covering greater than 5 acres	5					5	5																
	Provides platform for ecosystem enhancement covering greater than 2 acres	3	3	3	3	3			3	3	3			3		3		3					3	
	Provides platform for ecosystem enhancement covering 2 acres or less	1										1	1	1		1		1			1		1	1
Recreational Opportunities	Directly reduces threat to recreational features	5							5			5												
	Provides possible threat reduction to recreational features	3	3	3	3		3	3		3	3					3		3			3			
	Provides little or no threat reduction to recreational features	1				1				1			1	1	1		1		1		1	1	1	1
Public Safety	Is strongly beneficial to public safety associated with activities in the Wash	5	5	5				5	5			5												
	Provides some improvement to public safety associated with activities in the Wash	3				3	3			3	3		3			3	3	3	3	3			3	
	Provides little improvement to public safety associated with activities in the Wash	1			1							1		1	1						1		1	1
Permitting	Relatively minor permitting issues to be resolved	5			5	5	5	5				5		5	5	5	5	5	5	5				
	Wetlands, WQ, Wildlife, or Archeological issues exist and clearance required	3	3	3					3	3	3	3		3							3	3	3	3
	A sensitive site requiring mitigation or high level of protection	1																						
ROW & Access	Local Government Ownership, relatively easy acquisition	5					5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
	Federal Ownership, requiring federal review and approval	3			3	3																	3	3
	Private Ownership requiring extended negotiations	1	1	1																				
Other Funding	other local, state, or federal funding assistance for > 50% of project cost	5												5										
	Identified possibility for additional local, state, federal funding assistance for > 25% of project	3														3		3			3			
	No additional funding assistance identified beyond local sales tax revenues or < 25% project	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1

Appendix G – Project Prioritization

2003 Las Vegas Wash Capital Improvements Plan PROJECT PRIORTIZATION Channel Bed Stabilization

Facility Description	Channel Station	Facility ID	Priority Factor and Weight											Priority Value	Ranking	Completed
			Stability	Relationship	Cost Avoidance	WQ Enhancement	Ecosystem Enhancement	Recreational Benefit	Public Safety	Permitting	ROW & Access	Other Funding				
			5	5	5	3.5	3.5	3.5	3.5	2.5	2.5	2.5				
Historic Lateral Weir-W5.8	15855	810C (910AR)	5 25	5 25	5 25	5 17.5	5 17.5	3 10.5	3 10.5	3 7.5	5 12.5	5 12.5	163.5	1	X	
Rainbow Gardens Weir-W3.5	3070	810N (170-A)	5 25	5 25	5 25	5 17.5	5 17.5	3 10.5	3 10.5	3 7.5	5 12.5	5 12.5	163.5	2		
Demonstration Weir-W3.9 Relocation	5340	810K (810B)	5 25	5 25	5 25	5 17.5	5 17.5	3 10.5	5 17.5	3 7.5	5 12.5	1 2.5	160.5	3		
Pabco Road Weir-W6.7	19876	810D	5 25	5 25	5 25	3 10.5	5 17.5	3 10.5	5 17.5	1 2.5	5 12.5	5 12.5	158.5	4	X	
Bostick Weir-W5.4	13290	810E	5 25.0	5 25.0	5 25.0	5 17.5	5 17.5	3 10.5	3 10.5	5 12.5	5 12.5	1 2.5	158.5	5	X	
Upper Diversion Weir-W9.6	35464	810F	5 25	5 25	5 25	3 10.5	3 10.5	5 17.5	5 17.5	3 7.5	5 12.5	3 7.5	158.5	6		
Powerline Crossing Weir-W3.3	2130	810P	5 25	5 25	5 25	3 10.5	3 10.5	5 17.5	3 10.5	1 2.5	5 12.5	3 7.5	146.5	7		
Duck Creek Weir-W7.7	25304	810G	3 15.0	5 25.0	3 15.0	5 17.5	5 17.5	5 17.5	3 10.5	3 7.5	5 12.5	3 7.5	145.5	8		
Lower Narrows Weir-W4.7	9708	810M	5 25	3 15	3 15	5 17.5	5 17.5	3 10.5	3 10.5	3 7.5	5 12.5	1 2.5	133.5	9		
Homestead Weir-W4.2	6879	810L	5 25	3 15	3 15	5 17.5	3 10.5	3 10.5	3 10.5	3 7.5	5 12.5	1 2.5	126.5	10		
Visitor Center Weir-W9.3	33725	810J	3 15	3 15	3 15	1 3.5	1 3.5	5 17.5	5 17.5	5 12.5	5 12.5	5 12.5	124.5	11	X	
Monson Weir-W9.5	34725	810H	3 15	3 15	3 15	1 3.5	1 3.5	5 17.5	5 17.5	5 12.5	5 12.5	5 12.5	124.5	12	X	
DU Wetlands 1 Weir-W8.5	29488	810V	3 15	5 25	5 25	1 3.5	1 3.5	3 10.5	3 10.5	5 12.5	3 7.5	3 7.5	120.5	13		
Landfill Weir-W5.1	12000	810R	5 25	5 25	3 15	1 3.5	1 3.5	1 3.5	3 10.5	5 12.5	3 7.5	1 2.5	108.5	14		
DU Wetlands 2 Weir-W8.8	30980	810Y	3 15	3 15	3 15	3 10.5	1 3.5	3 10.5	3 10.5	5 12.5	3 7.5	3 7.5	107.5	15		
Upper Narrows Weir-W7.3	23408	810X	3 15	5 25	3 15	3 10.5	1 3.5	3 10.5	3 10.5	5 12.5	3 7.5	1 2.5	112.5	16		
Silverbowl Weir-W8.2	28213	810U	3 15	3 15	3 15	3 10.5	1 3.5	3 10.5	3 10.5	3 7.5	1 2.5	3 7.5	97.5	17		
Wells Weir-W4.5	8669	810Q	5 25	3 15	5 25	1 3.5	1 3.5	1 3.5	1 3.5	5 12.5	1 2.5	1 2.5	96.5	18		
Fire Station Weir-W3.0	719	810A	3 15	5 25	1 5	1 3.5	3 10.5	1 3.5	1 3.5	5 12.5	1 2.5	5 12.5	93.5	19	X	
Sunrise Mountain Weir-W7.1	22061	810W	3 15	3 15	3 15	3 10.5	1 3.5	1 3.5	3 10.5	3 7.5	3 7.5	1 2.5	90.5	20		
Tropicana Outfall Weir-W9.0	32272	810S	1 5	3 15	3 15	3 10.5	1 3.5	3 10.5	3 10.5	1 2.5	5 12.5	1 2.5	87.5	21		
D 14 Extension Weir-W9.2	33103	810T	1 5	3 15	3 15	1 3.5	1 3.5	3 10.5	3 10.5	3 7.5	5 12.5	1 2.5	85.5	22		

2003 Las Vegas Wash Capital Improvements Plan PROJECT PRIORTIZATION Bank Protection

Facility Description	Channel Stations	Facility ID	Priority Factor and Weight											Priority Value	Ranking	Completed
			Stability	Relationship	Cost Avoidance	WQ Enhancement	Ecosystem Enhancement	Recreational Benefit	Public Safety	Permitting	ROW & Access	Other Funding				
			5	5	5	3.5	3.5	3.5	3.5	2.5	2.5	2.5				
Visitor Center BP - S	33858	840J	5 25	5 25	5 25	5 17.5	3 10.5	5 17.5	5 17.5	5 12.5	5 12.5	5 12.5	175.5	1	X	
Bostick BP - S	13543	840E	3 15	5 25	5 25	5 17.5	5 17.5	5 17.5	5 17.5	5 12.5	5 12.5	5 12.5	172.5	2		
Demonstration BP - S	5514	840B	5 25	5 25	5 25	5 17.5	3 10.5	3 10.5	5 17.5	3 7.5	5 12.5	5 12.5	163.5	3	X	
Landfill BP - S	11568	840R	5 25	5 25	5 25	5 17.5	3 10.5	5 17.5	5 17.5	3 7.5	5 12.5	1 2.5	160.5	4	X	
Bostick BP - N	13543	830E	5 25	1 5	3 15	5 17.5	5 17.5	5 17.5	5 17.5	5 12.5	5 12.5	5 12.5	152.5	5		
Historic Lateral BP - N	15783	830C	5 25	5 25	5 25	5 17.5	5 17.5	1 3.5	3 10.5	3 7.5	3 7.5	5 12.5	151.5	6	X	
Historic Lateral BP - S	15783	840C	5 25	3 15	5 25	5 17.5	5 17.5	3 10.5	3 10.5	3 7.5	3 7.5	5 12.5	148.5	7	X	
Wells BP - S	8639	840Q	5 25	5 25	5 25	5 17.5	1 3.5	5 17.5	5 17.5	5 12.5	1 2.5	1 2.5	148.5	8	X	
Lower Narrows BP - N	9629	830M	5 25	3 15	3 15	5 17.5	5 17.5	3 10.5	5 17.5	5 12.5	5 12.5	1 2.5	145.5	9	X	
DU Wetlands 1 BP - S	29590	840V	5 25	3 15	5 25	3 10.5	3 10.5	3 10.5	3 10.5	5 12.5	5 12.5	5 12.5	144.5	10	X	
Upper Narrows BP - S	23403	840X	5 25	3 15	3 15	5 17.5	5 17.5	3 10.5	3 10.5	3 7.5	5 12.5	3 7.5	138.5	11	X	
Rainbow Gardens BP - N	3320	830N	5 25	3 15	5 25	5 17.5	3 10.5	3 10.5	5 17.5	3 7.5	3 7.5	1 2.5	138.5	12	X	
Duck Creek BP - S	25323	840G	5 25	3 15	3 15	3 10.5	5 17.5	3 10.5	5 17.5	3 7.5	5 12.5	3 7.5	138.5	13		
Powerline BP - S	2156	840P	5 25	3 15	5 25	5 17.5	3 10.5	3 10.5	5 17.5	3 7.5	1 2.5	1 2.5	133.5	14		
Rainbow Gardens BP - S	3320	840N	3 15	5 25	5 25	3 10.5	5 17.5	3 10.5	5 17.5	1 2.5	3 7.5	1 2.5	133.5	15	X	
Homestead BP - S	6864	840L	3 15	5 25	5 25	3 10.5	3 10.5	3 10.5	5 17.5	5 12.5	1 2.5	1 2.5	131.5	16		
Homestead BP - N	6864	830L	5 25	3 15	3 15	5 17.5	3 10.5	3 10.5	5 17.5	5 12.5	1 2.5	1 2.5	128.5	17	X	
Lower Narrows BP - S	9629	840M	3 15	3 15	3 15	5 17.5	5 17.5	3 10.5	3 10.5	5 12.5	5 12.5	1 2.5	128.5	18		
Monson BP - S	35606	840H	5 25	3 15	3 15	3 10.5	1 3.5	5 17.5	3 17.5	5 10.5	5 12.5	1 2.5	124.5	19	X	
Powerline BP - N	2156	830P	5 25	3 15	3 15	5 17.5	3 10.5	3 10.5	5 17.5	3 7.5	1 2.5	1 2.5	123.5	20		
DU Wetlands 2 BP - S	31064	840Y	3 15	3 15	3 15	3 10.5	3 10.5	3 10.5	3 10.5	5 12.5	5 12.5	3 7.5	119.5	21		

2003 Las Vegas Wash Capital Improvements Plan PROJECT PRIORTIZATION Bank Protection

Facility Description	Channel Stations	Facility ID	Priority Factor and Weight											Priority Value	Ranking	Completed
			Stability	Relationship	Cost Avoidance	WQ Enhancement	Ecosystem Enhancement	Recreational Benefit	Public Safety	Permitting	ROW & Access	Other Funding				
			5	5	5	3.5	3.5	3.5	3.5	2.5	2.5	2.5				
Duck Creek BP - N	25323	830G	5	1	3	5	3	3	3	3	3	1	3	111.5	22	
Upper Diversion BP - S	35500	840F	1	3	3	1	1	5	5	5	5	5	3	109.5	23	
Landfill BP - N	11568	830R	5	1	3	5	3	1	3	3	5	1	1	109.5	24	
Upper Diversion BP - N	35500	830F	1	3	3	1	1	3	5	5	5	1	1	97.5	25	
Demonstration BP - N	5514	830B	1	1	5	3	1	1	5	5	5	1	1	97.5	26	
Visitor Center BP - N	33858	830J	3	1	5	1	1	1	1	5	5	5	5	96.5	27	X
Pabco Road BP - S	19847	840D	1	5	3	1	3	3	1	5	3	1	1	95.5	28	
D-14 Extension BP - S	33290	840T	1	3	1	1	1	5	5	5	5	1	1	94.5	29	X
Pabco Road BP - N	19847	830D	3	1	3	3	3	1	3	5	3	1	1	92.5	30	
Wells BP - N	8639	830Q	3	1	1	3	3	1	3	5	5	1	1	87.5	31	
Fire Station BP - N	719	830A	1	3	3	1	3	1	1	5	5	1	1	83.5	32	
Silverbowl BP - S	28262	840U	3	3	1	1	3	1	1	5	5	1	1	83.5	33	
DU Wetlands 1 BP - N	29590	830V	3	3	1	1	1	1	3	5	5	1	1	83.5	34	
Fire Station BP - S	719	840A	1	3	3	1	3	1	1	5	5	1	1	83.5	35	
Tropicana Outfall BP - S	32301	840S	1	3	1	1	3	3	3	3	5	1	1	82.5	36	
Sunrise Mtn BP - S	22104	840W	3	1	1	3	3	1	3	3	3	1	1	77.5	37	
Monson BP - N	31064	830H	1	1	5	1	1	1	1	5	5	1	1	76.5	38	X
DU Wetlands 2 BP - N	31064	830Y	1	1	3	1	1	1	3	5	5	1	1	73.5	39	
D-14 Extension BP - N	33290	830T	3	1	1	1	1	1	3	3	5	1	1	68.5	40	X

2003 Las Vegas Wash Capital Improvements Plan PROJECT PRIORTIZATION Bank Protection

Facility Description	Channel Stations	Facility ID	Priority Factor and Weight										Priority Value	Ranking	Completed	
			Stability	Relationship	Cost Avoidance	WQ Enhancement	Ecosystem Enhancement	Recreational Benefit	Public Safety	Permitting	ROW & Access	Other Funding				
			5	5	5	3.5	3.5	3.5	3.5	2.5	2.5	2.5				
Silverbowl BP - N	28262	830U	3	1	1	1	1	1	1	1	5	5	1	66.5	41	
Upper Narrows BP - N	23403	830X	1	1	3	1	1	1	1	3	5	1	61.5	42		
Tropicana Outfall BP - N	32301	830S	1	1	1	1	1	3	1	3	5	1	58.5	43		
Sunrise Mtn BP - N	22104	830W	1	1	1	1	1	1	1	3	3	1	46.5	44		

Appendix H – Sales Tax Received and Distributed

Southern Nevada Water Authority
Sale Tax Received and Distributed

Collection Month	Received Date	Receipts	Distributions			
		Gross Amount	Clark Co. Rural Areas	LV Wash	Wastewater Agencies	Water SNWA
Apr-99	07-Jul-99	3,995,539.18	168,120.30	159,821.57		3,667,597.31
May-99	27-Jul-99	4,083,781.36	171,833.27	163,351.25		3,748,596.84
Jun-99	27-Aug-99	4,466,630.55	187,942.41	178,665.22		4,100,022.92
Jul-99	24-Sep-99	3,876,061.83	163,093.05	155,042.47		3,557,926.31
Aug-99	22-Oct-99	4,056,712.59	170,694.30	162,268.50		3,723,749.79
Sep-99	29-Nov-99	4,389,790.35	184,709.21	175,591.61		4,029,489.53
Oct-99	27-Dec-99	4,081,696.66	171,745.55	163,267.87		3,746,683.24
Nov-99	25-Jan-00	4,210,100.80	177,148.41	168,404.03		3,864,548.36
Dec-99	29-Feb-00	5,077,263.36	213,636.01	203,090.53		4,660,536.82
Jan-00	24-Mar-00	4,011,032.32	168,772.21	160,441.29		3,681,818.82
Feb-00	25-Apr-00	4,056,424.50	170,682.17	162,256.98		3,723,485.35
Mar-00	26-May-00	4,718,343.86	198,533.75	188,733.75		4,331,076.36
Apr-00	28-Jun-00	4,285,441.90	180,318.54	171,417.68		3,933,705.68
May-00	21-Jul-00	4,403,289.00	185,277.19	176,131.56		4,041,880.25
Jun-00	25-Aug-00	4,816,863.21	202,679.15	192,674.53		4,421,509.53
Jul-00	22-Sep-00	4,316,704.54	181,633.98	172,668.18		3,962,402.38
Aug-00	20-Oct-00	4,470,849.30	188,119.93	178,833.97		4,103,895.40
Sep-00	29-Nov-00	4,819,576.45	202,793.32	192,783.06		4,424,000.07
Oct-00	22-Dec-00	4,363,936.03	183,621.34	174,557.44		4,005,757.25
Nov-00	22-Jan-01	4,423,626.78	186,132.94	176,945.07		4,060,548.77
Dec-00	26-Feb-01	5,353,219.53	225,247.42	214,128.78		4,913,843.33
Jan-01	23-Mar-01	4,196,777.45	176,587.80	167,871.10		3,852,318.55
Feb-01	20-Apr-01	4,238,833.88	178,357.41	169,553.36		3,890,923.11
Mar-01	25-May-01	5,122,947.79	215,558.27	204,917.91		4,702,471.61
Apr-01	22-Jun-01	4,554,599.51	191,643.88	182,183.98	1,588,693.23	2,592,078.42
May-01	20-Jul-01	4,811,654.02	202,459.97	192,466.16	1,678,356.60	2,738,371.29
Jun-01	24-Aug-01	4,913,175.32	206,731.68	196,527.01	1,713,768.32	2,796,148.31
Jul-01	21-Sep-01	4,573,130.34	192,423.61	182,925.21	1,595,156.98	2,602,624.54
Aug-01	19-Oct-01	4,769,280.98	200,677.04	190,771.24	1,663,576.43	2,714,256.27
Sep-01	27-Nov-01	4,281,399.03	180,148.43	171,255.96	1,493,397.96	2,436,596.68
Oct-01	26-Dec-01	4,694,971.17	197,550.30	187,798.85	1,637,656.37	2,671,965.65
Nov-01	29-Jan-02	4,472,344.19	188,182.83	178,893.77	1,560,001.69	2,545,265.90
Dec-01	01-Mar-02	5,232,196.78	220,155.14	209,287.87	1,825,046.43	2,977,707.34
Jan-02	25-Mar-02	4,326,824.60	182,059.80	173,072.98	1,509,242.89	2,462,448.93
Feb-02	22-Apr-02	4,349,265.12	183,004.03	173,970.60	1,517,070.38	2,475,220.11
Mar-02	24-May-02	5,103,195.94	214,727.18	204,127.84	1,780,049.55	2,904,291.37
Apr-02	26-Jun-02	4,750,192.16	199,873.84	190,007.69	1,656,918.04	2,703,392.59
May-02	22-Jul-02	4,821,867.75	202,889.73	192,874.71	1,681,919.26	2,744,184.05
Jun-02	26-Aug-02	4,970,041.83	209,124.45	198,801.67	1,733,603.97	2,828,511.74
Jul-02	27-Sep-02	4,749,454.66	199,842.80	189,978.19	1,656,660.79	2,702,972.88
Aug-02	29-Oct-02	5,022,282.62	211,322.59	200,891.30	1,751,826.12	2,858,242.61
Sep-02	27-Nov-02	4,874,255.97	205,094.07	194,970.24	1,700,192.83	2,773,998.83
Oct-02	30-Dec-02	4,823,951.75	202,977.42	192,958.07	1,682,646.18	2,745,370.08
Nov-02	27-Jan-03	4,774,928.64	200,914.67	190,997.15	1,665,546.39	2,717,470.43
Dec-02	28-Feb-03	5,797,103.44	243,924.72	231,884.14	2,022,091.94	3,299,202.64
Jan-03	28-Mar-03	4,691,518.79	197,405.04	187,660.75	1,636,452.14	2,670,000.86
Feb-03	25-Apr-03	4,578,089.84	192,632.29	183,123.59	1,596,886.90	2,605,447.06
Mar-03	30-May-03	5,436,587.00	228,755.27	217,463.48	1,896,339.93	3,094,028.32
Apr-03	27-Jun-03	5,141,703.75	216,347.47	205,668.15	1,793,481.49	2,926,206.64

Southern Nevada Water Authority
Sale Tax Received and Distributed

Collection Month	Received Date	Receipts	Distributions			
		Gross Amount	Clark Co. Rural Areas	LV Wash	Wastewater Agencies	Water SNWA
Totals		226,349,458.42	9,524,106.18 4.21%	9,053,978.34 4.00%	42,036,582.81 18.57%	165,734,791.09 73.22%

Appendix I – Sales Tax Revenue Projection

**Clark County Water and Wastewater Infrastructure (Quarter Penny) Sales Tax
Received by the Southern Nevada Water Authority**

Calendar Year	Clark Co. Population		Gross Sales Tax Receipts				Sales Tax Distributions			
	Count ²	% Change	Ratio	Assumed	After	% Change	Clark Co.	LV Wash	Wastewater	SNWA CIP
				Inflation	Inflation		Rural Areas		Agencies	
Forecasted Sales Tax Allocation Ratios										
							4.2%	4.0%	38.0%	53.8%
1999 Act ¹	1,321,319				38,237,577 ³		1,608,923	1,529,503	0	35,099,151
2000 Act	1,428,690	8.13%	37.82		54,039,307		2,273,812	2,161,572	0	49,603,923
2001 Act	1,498,279	4.87%	37.28		55,861,310	3.37%	2,350,476	2,234,452	14,755,654 ⁵	36,520,728
2002 Act	1,583,998	5.72%	36.85		58,363,364	4.48%	2,455,755	2,334,535	20,357,768	33,215,306
2003	1,637,600	3.38%	38.25	2.50%	62,639,549	7.33%	2,630,861	2,505,582	23,803,029	33,700,078
2004	1,686,062	2.96%	39.21	2.50%	66,105,592	5.53%	2,776,435	2,644,224	25,120,125	35,564,809
2005	1,730,698	2.65%	40.19	2.50%	69,552,031	5.21%	2,921,185	2,782,081	26,429,772	37,418,993
2006	1,772,274	2.40%	41.19	2.50%	73,003,429	4.96%	3,066,144	2,920,137	27,741,303	39,275,845
2007	1,811,123	2.19%	42.22	2.50%	76,468,787	4.75%	3,211,689	3,058,751	29,058,139	41,140,207
2008	1,847,089	1.99%	43.28	2.50%	79,937,018	4.54%	3,357,355	3,197,481	30,376,067	43,006,116
2009	1,880,861	1.83%	44.36	2.50%	83,433,543	4.37%	3,504,209	3,337,342	31,704,746	44,887,246
2010	1,912,777	1.70%	45.47	2.50%	86,970,545	4.24%	3,652,763	3,478,822	33,048,807	46,790,153
2011	1,944,978	1.68%	46.60	2.50%	90,645,534	4.23%	3,807,112	3,625,821	34,445,303	48,767,297
2012	1,977,466	1.67%	47.77	2.50%	94,463,625	4.21%	3,967,472	3,778,545	35,896,178	50,821,430
2013	2,009,592	1.62%	48.96	2.50%	98,398,243	4.17%	4,132,726	3,935,930	37,391,332	52,938,254
2014	2,041,279	1.58%	50.19	2.50%	102,448,518	4.12%	4,302,838	4,097,941	38,930,437	55,117,303
2015	2,072,398	1.52%	51.44	2.50%	106,610,589	4.06%	4,477,645	4,264,424	40,512,024	57,356,497
2016	2,102,905	1.47%	52.73	2.50%	110,884,463	4.01%	4,657,147	4,435,379	42,136,096	59,655,841
2017	2,132,871	1.42%	54.05	2.50%	115,276,160	3.96%	4,841,599	4,611,046	43,804,941	62,018,574
2018	2,162,262	1.38%	55.40	2.50%	119,786,284	3.91%	5,031,024	4,791,451	45,518,788	64,445,021
2019	2,191,156	1.34%	56.78	2.50%	124,421,645	3.87%	5,225,709	4,976,866	47,280,225	66,938,845
2020	2,219,714	1.30%	58.20	2.50%	129,194,352	3.84%	5,426,163	5,167,774	49,093,854	69,506,561
2021	2,248,445	1.29%	59.66	2.50%	134,138,251	3.83%	5,633,807	5,365,530	50,972,535	72,166,379
2022	2,277,696	1.30%	61.15	2.50%	139,280,397	3.83%	5,849,777	5,571,216	52,926,551	74,932,854
2023	2,307,460	1.31%			129,839,885		5,453,275	5,193,595	49,339,156	69,853,858
Totals					2,300,000,000 ⁴		96,615,901	92,000,000	830,642,830	1,280,741,270
% of Total							4.2%	4.0%	36.1%	55.7%

Sources/Notes

- ¹ Actual sales tax receipts data from SNWA Finance Department.
- ² Actual population data - Clark Co. Dept. of Comprehensive Planning. Forecast population data - UNLV Center for Business and Economic Research (CBER).
- ³ This sales tax went into effect in April, 1999. Therefore collections in calendar year 1999 do not reflect a full 12 months.
- ⁴ State law caps sales tax receipts at \$2.3 Billion, or June 30 , 2025, whichever occurs first. Collections in calendar year 2023 do not reflect a full 12 months.
- ⁵ By interlocal agreement, wastewater agencies did not receive sales tax proceeds for the first two years.

Appendix J – Inter-account Loan Debt Service

Las Vegas Wash Sales Tax Debt Service Loan #1

Principal (\$)	22,037,492
Interest Rate (%)	5.00%
Term (years)	10
Payment (\$)	2,853,956

Debt Service Payments				
Year	Principle	Interest	Total	Balance
0				22,037,492
1	1,752,081	1,101,875	2,853,956	20,285,411
2	1,839,686	1,014,271	2,853,956	18,445,725
3	1,931,670	922,286	2,853,956	16,514,055
4	2,028,253	825,703	2,853,956	14,485,802
5	2,129,666	724,290	2,853,956	12,356,136
6	2,236,149	617,807	2,853,956	10,119,987
7	2,347,957	505,999	2,853,956	7,772,030
8	2,465,355	388,602	2,853,956	5,306,676
9	2,588,622	265,334	2,853,956	2,718,053
10	2,718,053	135,903	2,853,956	0
Totals	22,037,492	6,502,068	28,539,560	

Appendix K – Completed Projects Summary

COMPLETED PROJECTS SUMMARY

<u>Project No.</u>	<u>Project Title</u>	<u>Year Completed</u>	<u>Cost (\$1,000)</u>
810B	Temporary Demonstration Weir – W3.9	1999	\$173
810A	Fire Station Weir – W3.0	2000	\$63
810C (910-AR)	Historic Lateral Weir – W5.8	2000	\$1,823
810D	Pabco Weir – W6.7 (Clark County)	2000	\$4,700
810H	Monson Weir – W9.5	2002	\$152
810J	Visitor Center Weir – W9.3	2002	\$172
810E	Bostick Weir – W5.4	2003	\$4,938
830C	Bank Protection north - Historic Lateral BP5.8N (2,600 lf)	2001	\$221
840C	Bank Protection south - Historic Lateral BP5.8S (2,400 lf)	2001	\$207
840J	Bank Protection south - Visitor Center BP9.3S (1,100 lf)	2001	\$88
840B	Bank Protection south - Demonstration BP3.9S (1,200 lf)	2001	\$177
840T	Bank Protection south - D-14 Extension BP9.2S (400 lf)	2001	\$44
830N	Bank Protection north - Three Kids Wash (Rainbow Gardens) BP3.5N (1,400 lf)	2002	\$51
840N	Bank Protection south - Three Kids Wash (Rainbow Gardens) BP3.5S (1,200 lf)	2002	\$41
830J	Bank Protection north - Visitor Center BP9.3N (400 lf)	2002	\$41
830H	Bank Protection north - Monson BP9.5N (200 lf)	2002	\$20
840H	Bank Protection south - Monson BP9.5S (200 lf)	2002	\$20
830T	Bank Protection north - D-14 Extension BP9.2N (300 lf)	2002	\$10
840Q	Bank Protection south - Wells BP4.5S (1,100 lf)	2003	\$95
830L	Bank Protection north - Homestead BP4.2N (1,600 lf)	2003	\$146
840V	Bank Protection south - DU Wetlands #1 BP8.5S (800 lf)	2003	\$62
830M	Bank Protection north - Lower Narrows BP4.7N (1,500 lf)	2003	\$129
840R	Bank Protection south - Landfill BP5.1S (600 lf)	2003	\$50
840X	Bank Protection south - Upper Narrows BP7.3S (900 lf)	2003	\$78
880B	Revegetation south – Demonstration RV3.9S (0.90 ac) (grant funding)	2000	\$43
870C	Revegetation north – Historic Lateral RV5.8N (2.45 ac) (grant funding)	2001	\$100
880C	Revegetation south – Historic Lateral RV5.8S (2.45 ac) (grant funding)	2001	\$100
880D	Revegetation south – Pabco RV6.7S (2.20 ac) (grant funding)	2001	\$254
870H	Revegetation north – Monson RV9.5N (0.94 ac) (grant funding)	2002	\$15
880H	Revegetation south – Monson RV9.5S (0.94 ac) (grant funding)	2002	\$15
870J	Revegetation north – Visitor Center RV9.3N (1.47 ac) (grant funding)	2002	\$15
880J	Revegetation south – Visitor Center RV9.3S (1.47 ac) (grant funding)	2002	\$15
860A	2000 Haulage Contract	2000	\$304
860B	2001 Haulage Contract	2001	\$753
860C	2002 Haulage Contract	2002	\$866
860D	2003 Haulage Contract	2003	\$489
860L	2001 Remapping	2001	\$80
860S	Sediment Study I	2003	\$177