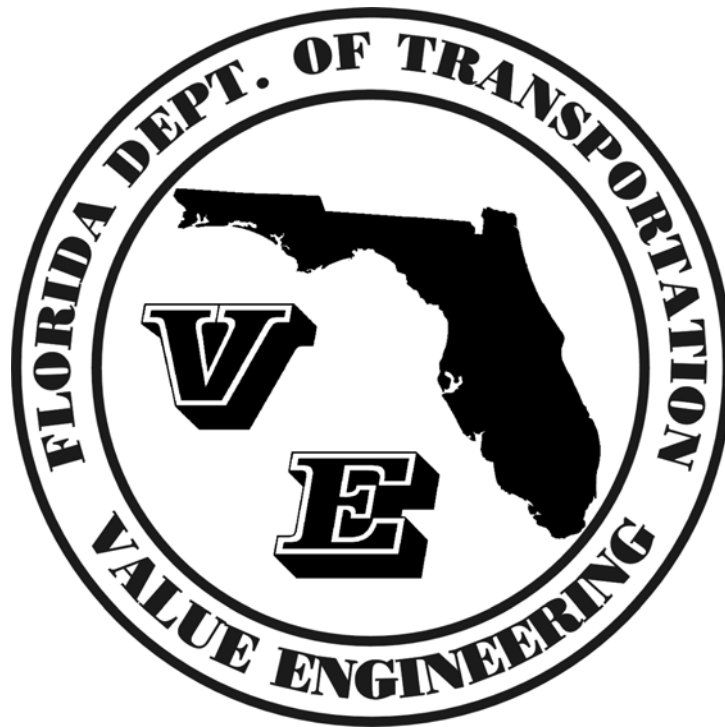


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Value Engineering  
Annual Report  
FY 2009/2010



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# Executive Summary

## VE During Project Development

The effort put forth in value engineering by the department over the past ten years has produced more than \$2.4 billion in implemented cost avoidance. This effort has led to the department being recognized as a national leader in value engineering .

The districts completed 24 studies or 75% of the original number of studies scheduled for fiscal year 2009/2010. The original work plan had 32 studies scheduled for the year and the target was to complete 75% or 24 of the planned studies. Due to the dynamics of the department's work program, 17 of the 32 scheduled studies (53%) were either dropped from the work plan altogether or rescheduled for the 2010/2011 fiscal year, while nine of the completed studies were added to the original work plan.

During this same period, the districts acted on 101 recommendations, approving 49 for a 49% adoption rate. Forty-six of the approved recommendations resulted in \$192.4 million in project cost avoidance/savings. The remaining three recommendations were value added recommendations that increased project performance, while adding \$3.8 million to the project cost. Therefore, the total value of the approved recommendations, including the value added recommendations, produced **\$188.6 million in project cost avoidance/savings.**

The approved recommendations resulted in a 5.46% project saved and a Return on Investment (ROI) of \$156 to \$1. The percent project saved is calculated by dividing the value of all approved recommendations by the total costs of the projects studied, while the ROI is calculated by dividing the value of all approved recommendations by the cost of administering the program.

There are currently 56 pending recommendations totaling \$314.8 million in potential cost avoidance/savings. This is a 19% increase in the total number of pending recommendations from the 4th quarter of last year. There are currently 32 recommendations that have been pending for more than 12 months, which is more than 50% of the total number of pending recommendations. Since the VE Study is a 'snapshot' of the project at some point in time of project development and projects are continuously moving forward in development, this is a concern. The longer recommendations are unresolved and in a pending status the less likely that they will be adopted because the development of the project has advanced.

## VE During Construction

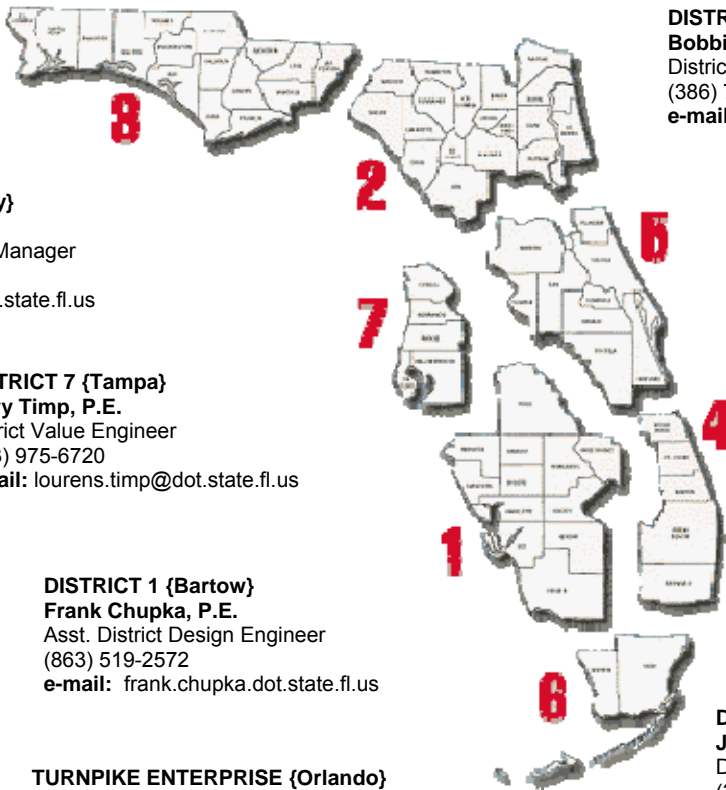
Sixteen Value Engineering Change Proposals (VECP's) were submitted during fiscal year 2009/20010, totaling more than \$2.66 million in potential project savings. During this same period, the districts acted on 13 proposals approving nine. The implemented savings from the nine approved VECP's was \$1.36 million. There are currently eight pending VECP's totaling \$2.37 million in potential project savings.

# Program Organization

**Mission:** Administer the Florida Department of Transportation Value Engineering Program, satisfying the needs of the stakeholders.

**Vision:** Value Engineering . . . providing an effective support function which maximizes project and process value for the transportation systems in the State of Florida.

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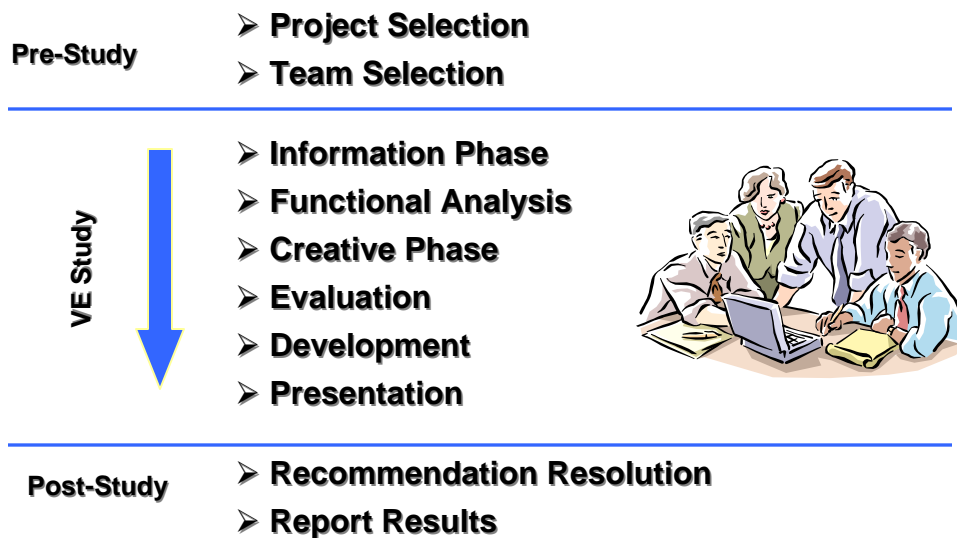
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# Value Engineering Overview

## What is Value Engineering

Value Engineering (VE) is the formal application of a proven and effective tool used to improve the value of a project, product or service. VE strives to optimize the use of allocated funds without reducing the quality or performance. A multi-disciplined team is assembled and the six phases of the VE Job Plan (Information, Functional Analysis, Creative, Evaluation, Development and Presentation) are used to guide the team through the process.

### VE Job Plan



The administration of the VE Program can be broken down into the following key processes.

Pre-Study	Study	Post Study
Project Selection	Conduct VE Study	Recommendation Resolution
Team Selection		Report Results

# Value Engineering Overview

## Performance Measures

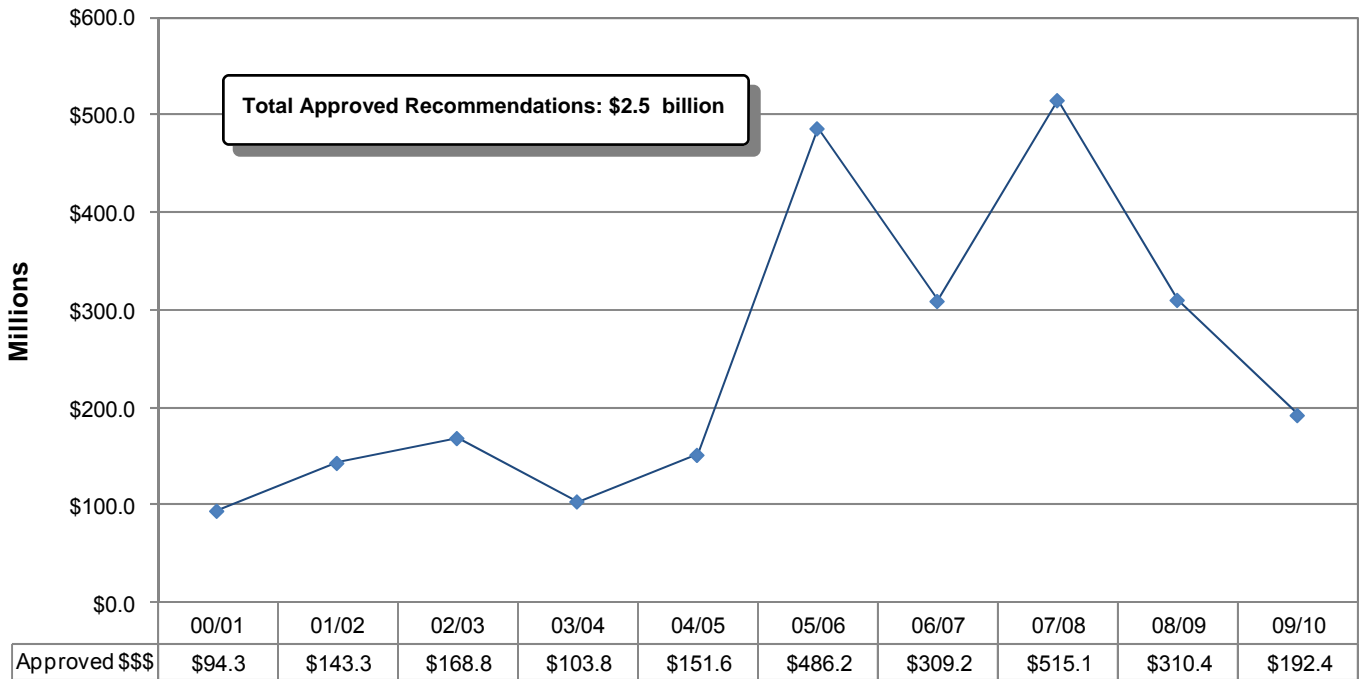
The VE Program is managed through the use of the Process Control Systems found in Appendix B. Each process has a set of Quality and In-Process measures that are used to evaluate the performance of the program. The Quality Measures for the overall VE program are defined below.

<b>VE Program</b>	
<b>Quality Measure</b>	<b>Calculation</b>
Q1: Approved Cost Avoidance Recommendations	Sum of all approved cost avoidance/savings recommendations
Q2: Approved Value Added Recommendations	Sum of all approved value added recommendations
Q3: Adoption Rate	$\frac{\text{\# of Approved Recommendations}}{\text{\# of Proposed Recommendations}}$
Q4: Percent Project Saved	$\frac{\text{Value of Approved Recommendations}}{\text{Total Project Costs}}$
Q5: Return on Investment (only reported annually)	$\frac{\text{Value of Approved Recommendations}}{\text{Total cost of VE Program}}$
<b>VECP Program</b>	
Q1: Number of VECP's	Sum of all VECP's
Q2: Approved Cost Savings	Sum of all approved VECP savings
Q3: Percent Project Saved	$\frac{\text{Value of Approved Proposals}}{\text{Total Project Costs}}$

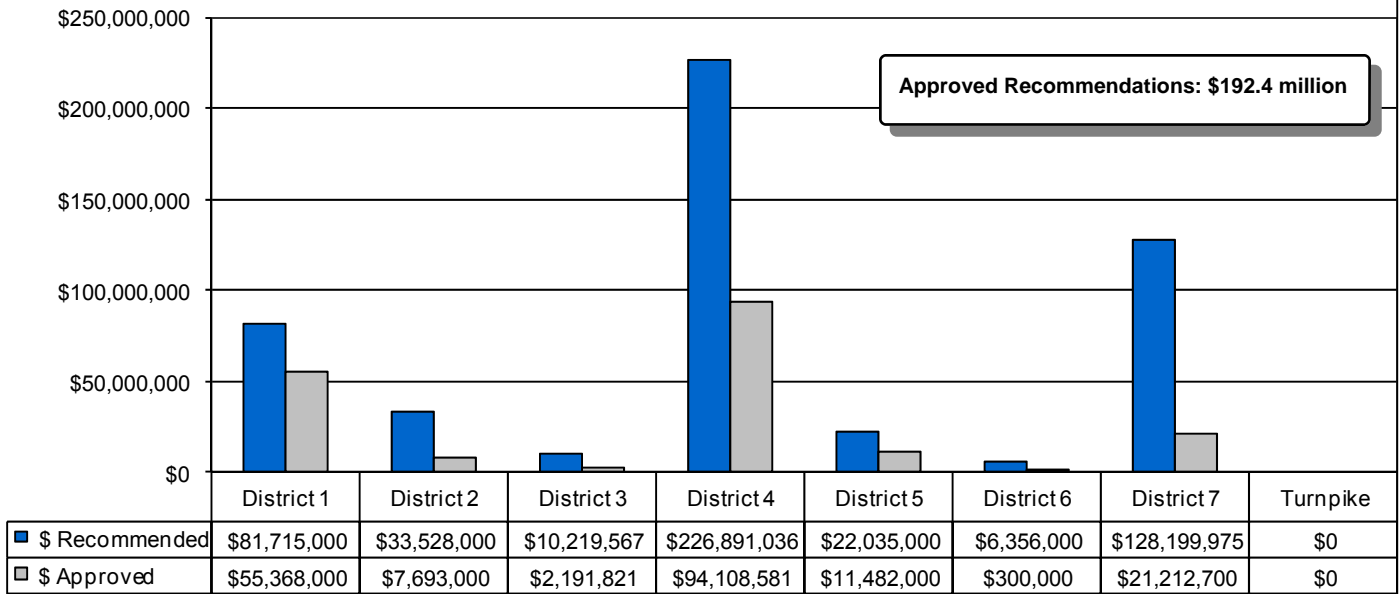
# FY 2009/2010 Performance Measures

# Adopted Recommendations

**Q1: Annual Approved Cost Avoidance/Savings**



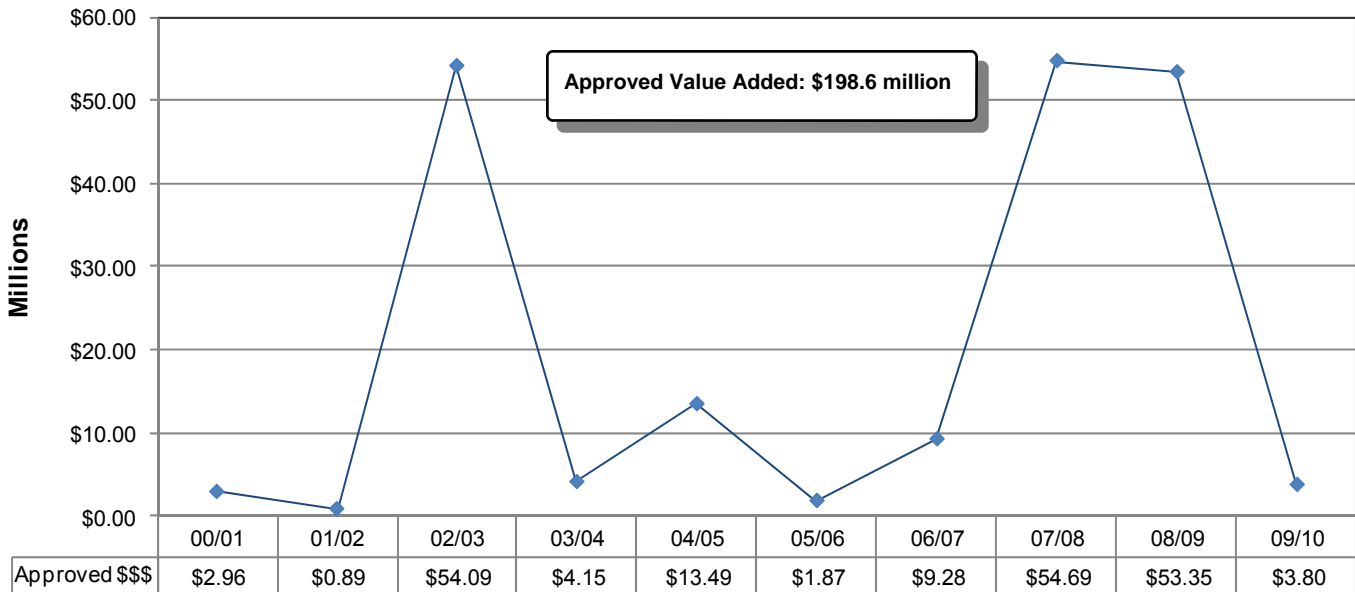
**Q1: Cost Avoidance Recommendations  
Annual Report FY 2009/2010**



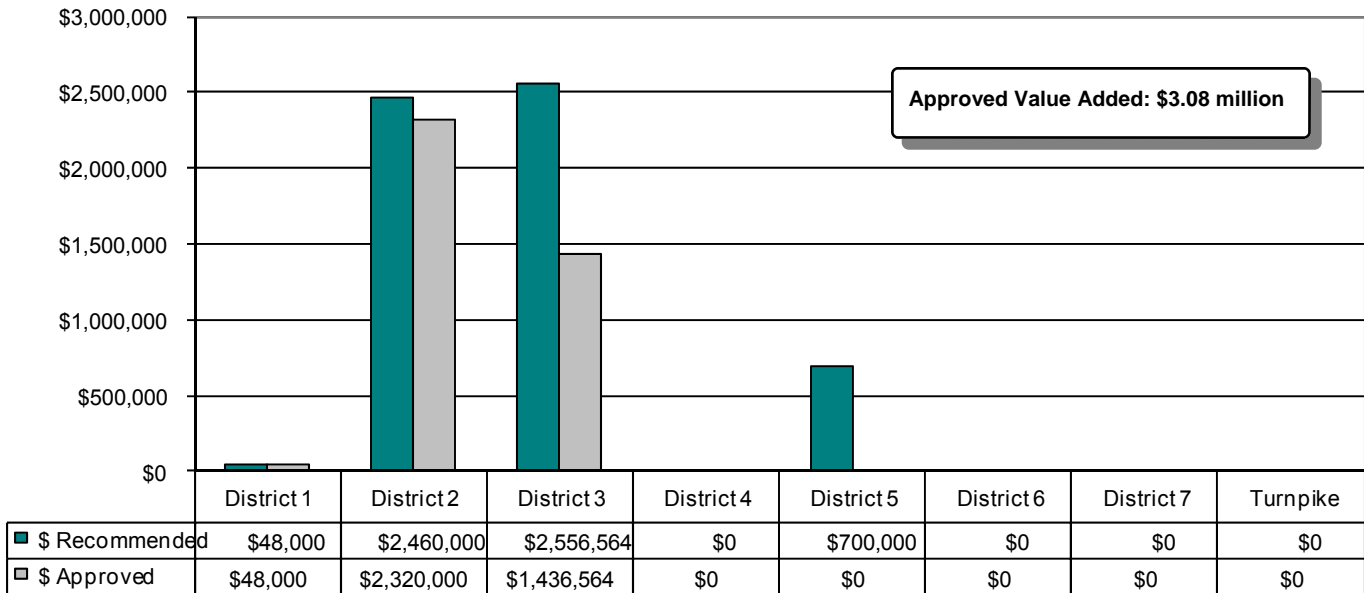


# Adopted Recommendations

**Q2: Annual Approved Value Added Recommendations**



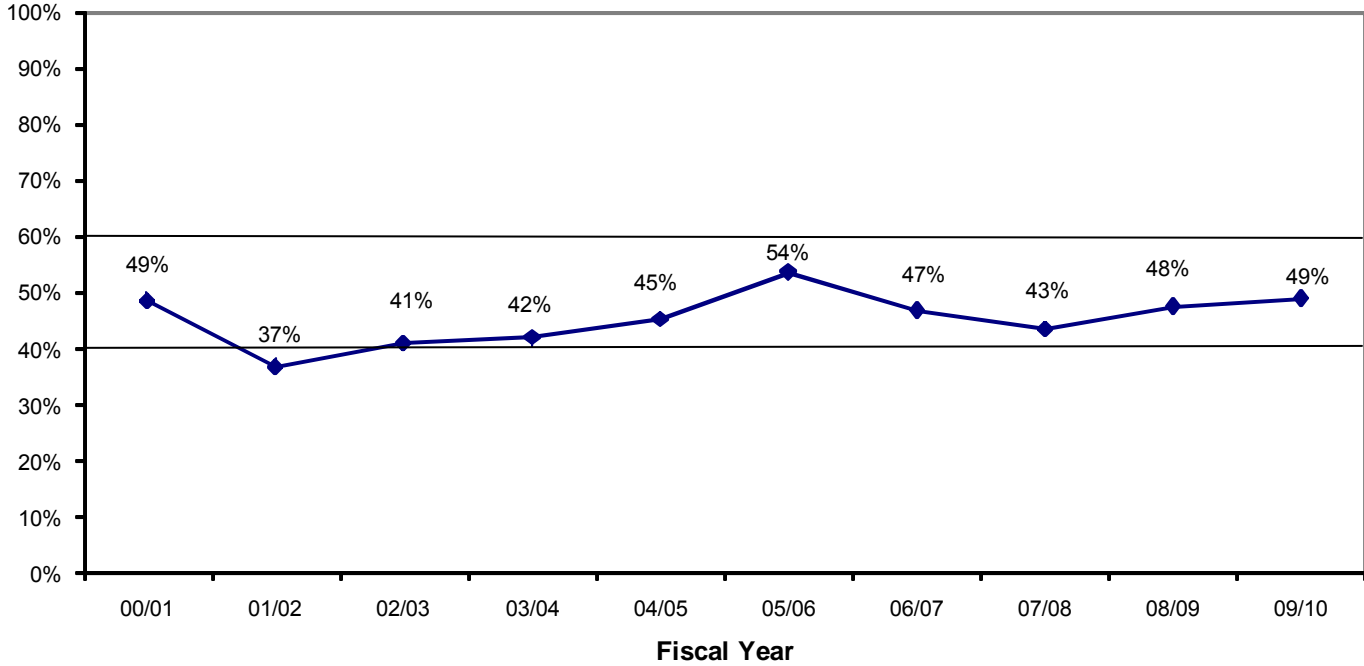
**Q2: Value Added Recommendations  
Annual Report FY 2009/2010**



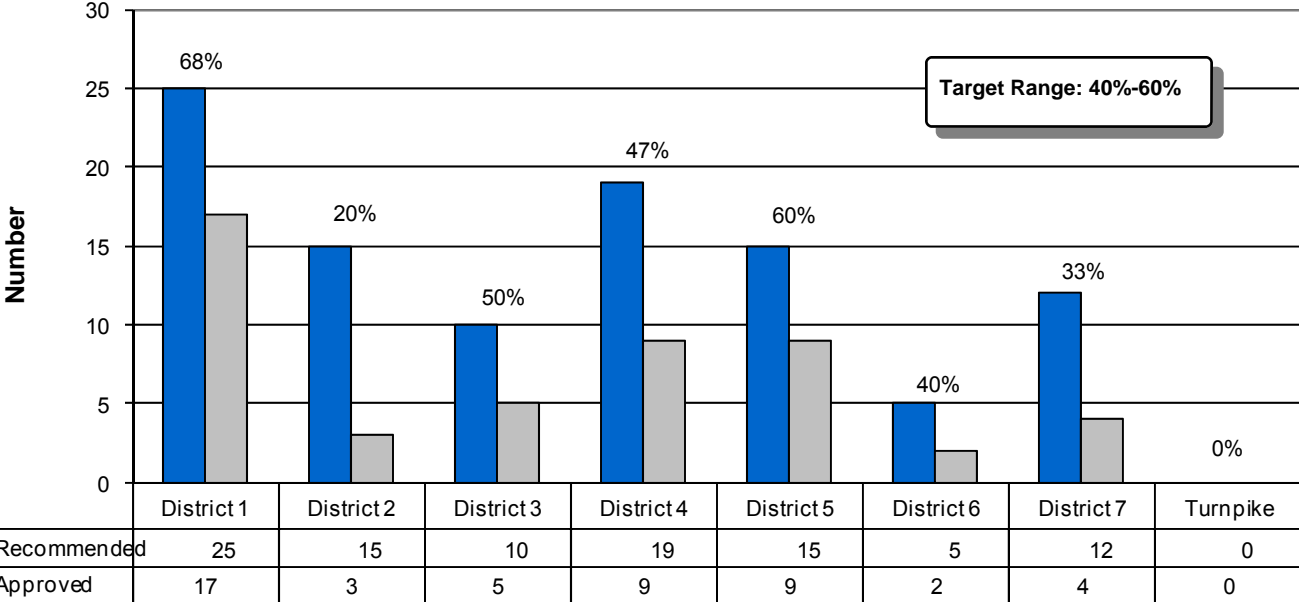
\* A Value Added Recommendation significantly increases the performance of a function while also increasing the cost.

# Adoption Rates

**Q3: Annual Adoption Rate**

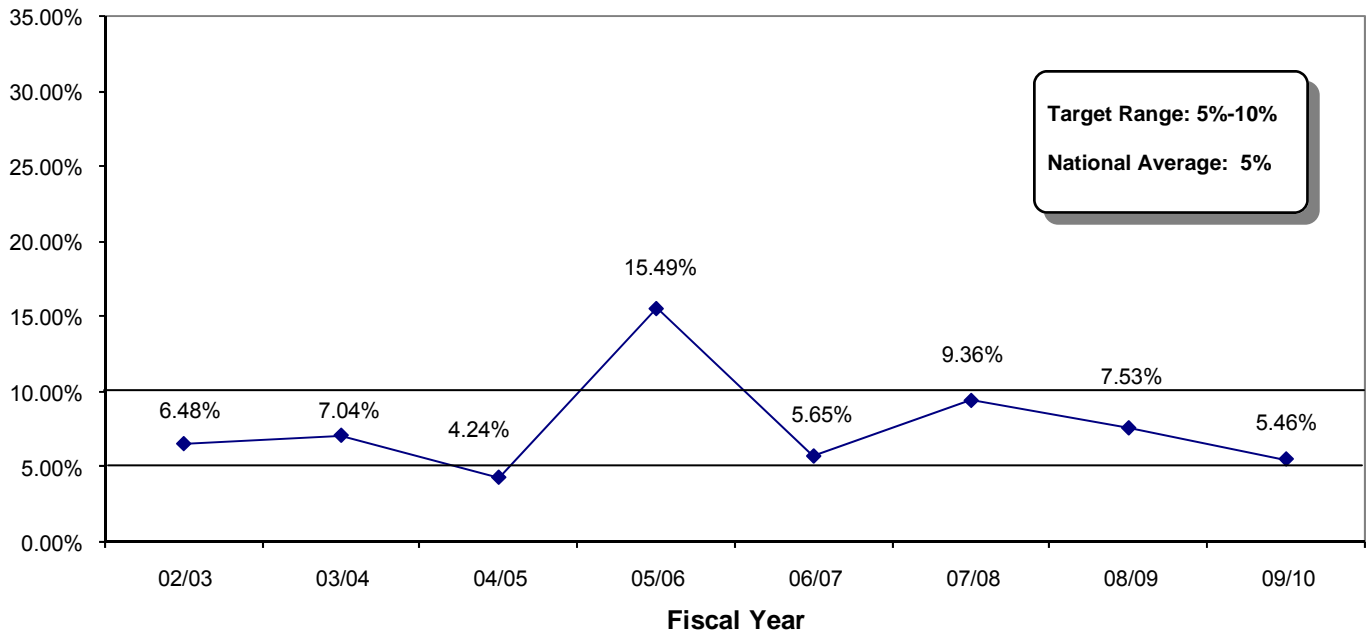


**Q3: Adopted Recommendations  
Annual Report FY 2009/2010**

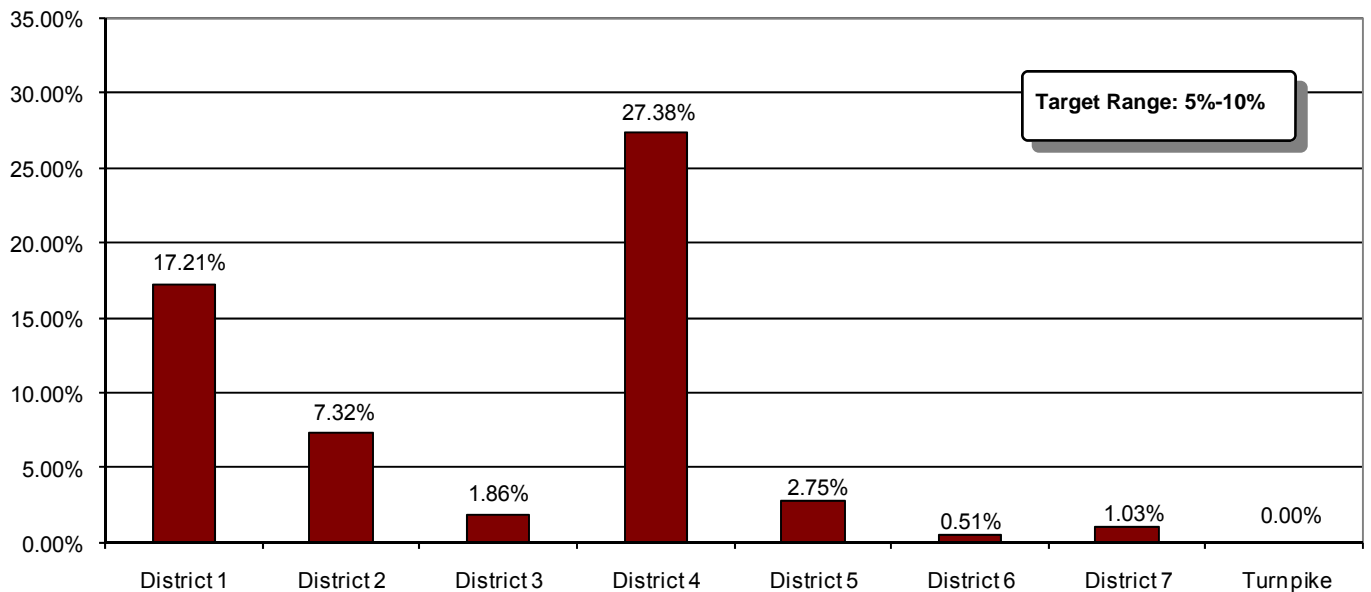


# Percent Project Saved

## Q4: Annual Percent Project Saved

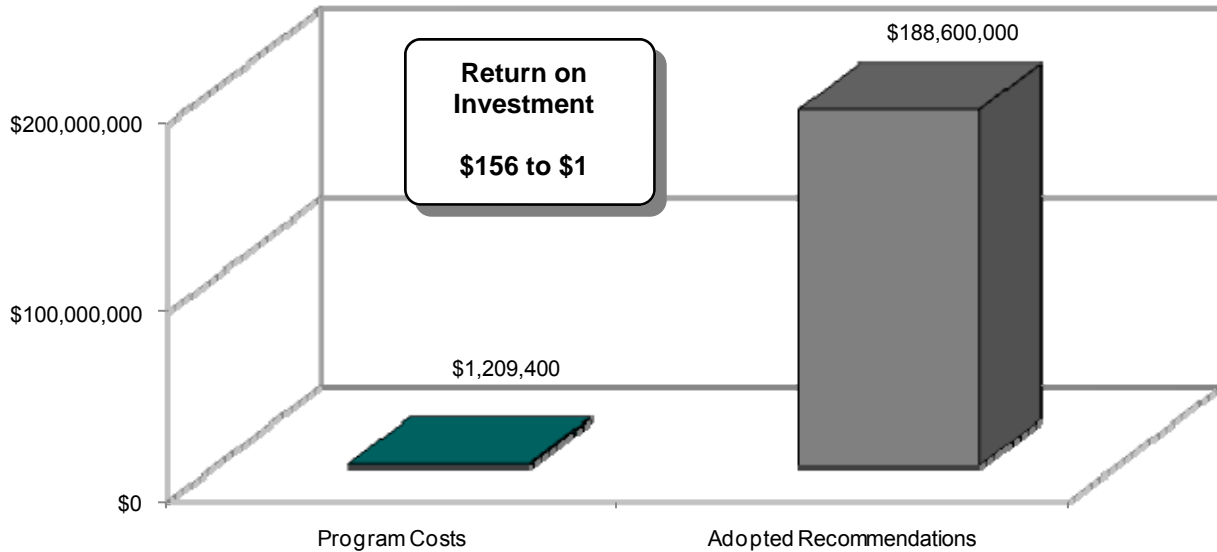


## Q4: Percent Project Saved Annual Report Fiscal Year 2009/2010

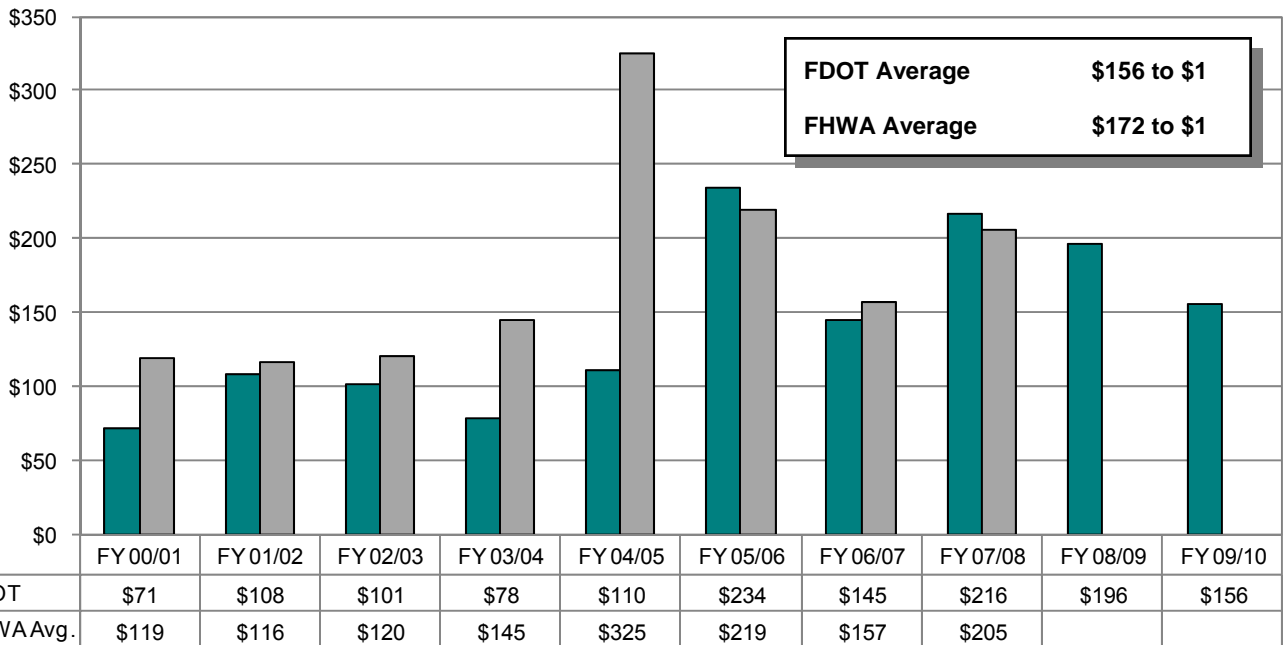


# Return on Investment

**Q5: Return on Investment**  
Annual Report Fiscal Year 2009/2010



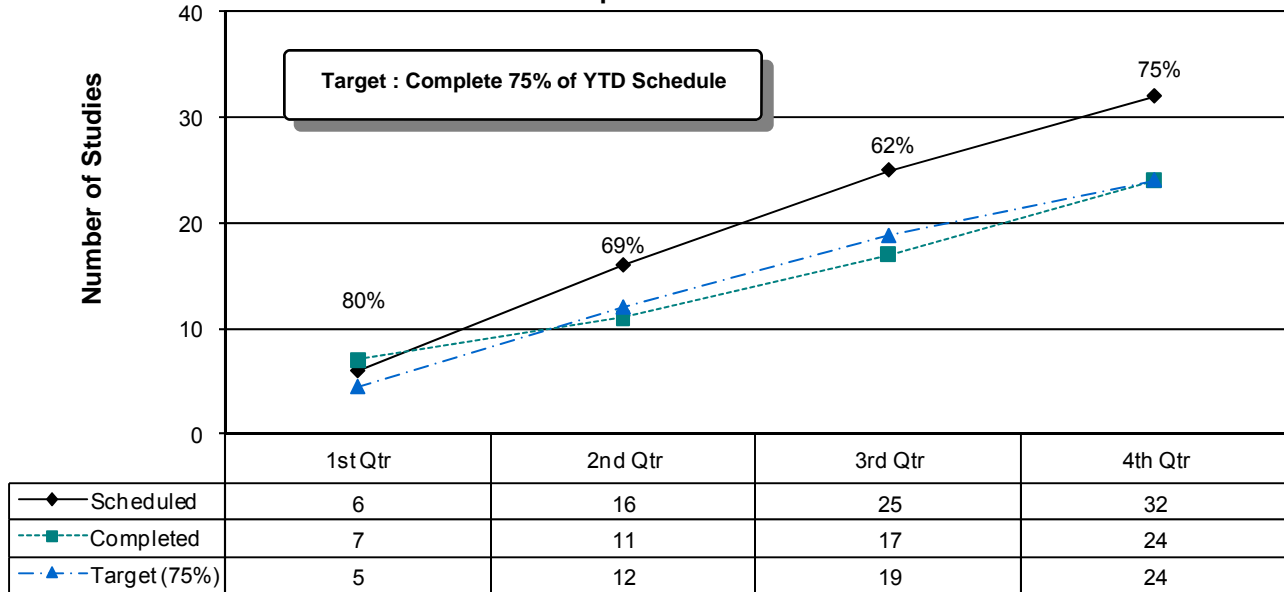
**Q5: Annual Return on Investment**



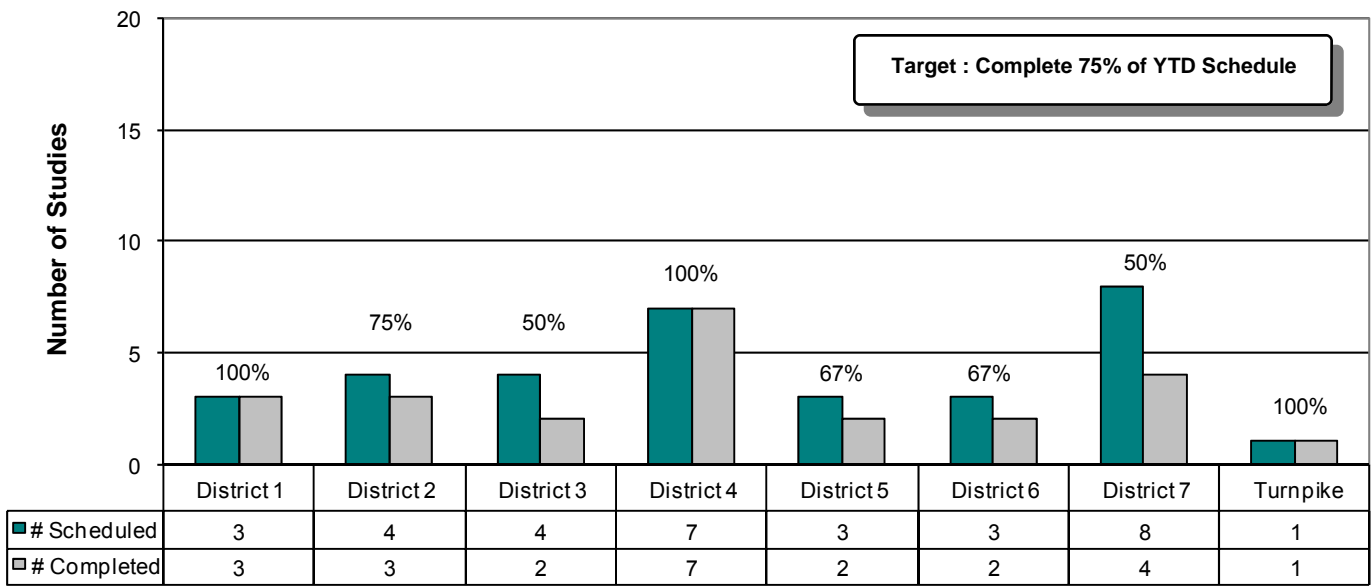
\* FHWA data for fiscal year 2008/2009 or 2009/2010 was not available at time of publication.

# Work Plan Completion

**P1: VE Studies Scheduled vs. Completed**  
Annual Report FY 2009/2010

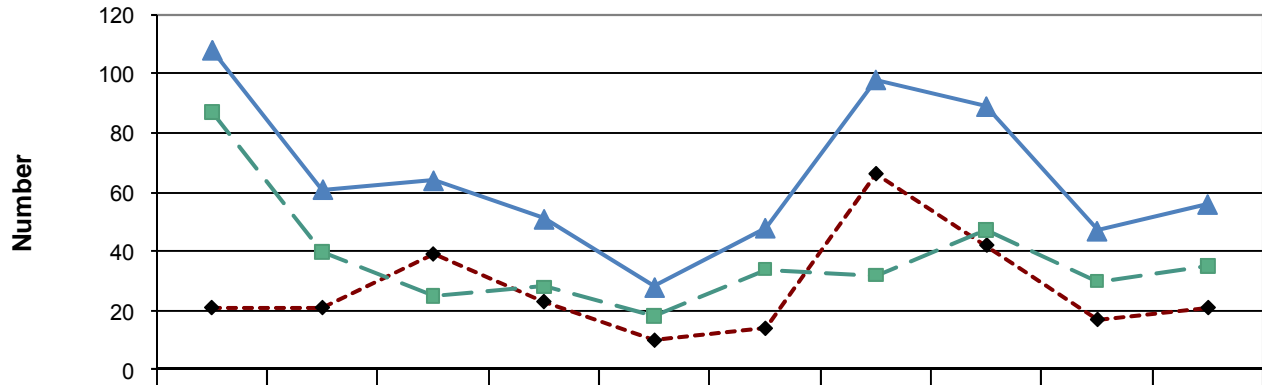


**P1: VE Studies Scheduled vs Completed**  
Annual Report FY 2009/2010



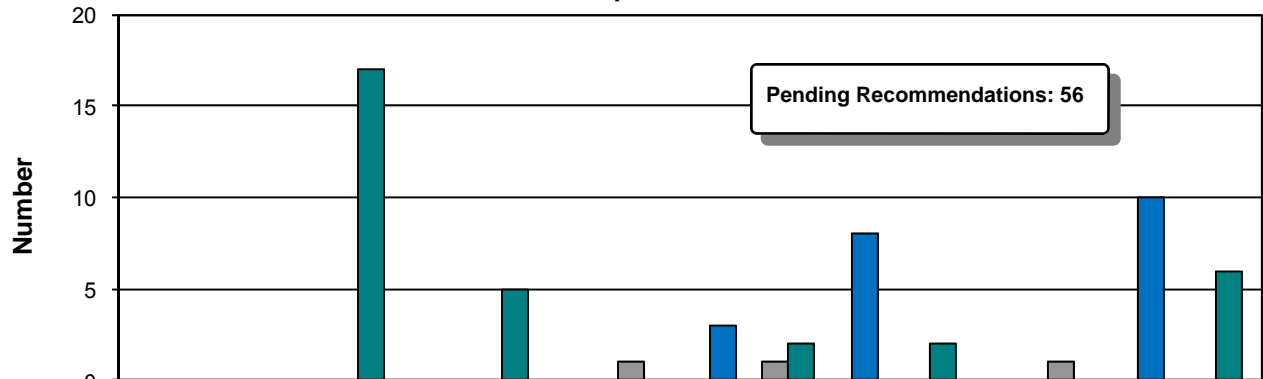
# Pending Recommendations

**P4: Annual # Pending Recommendations**  
Annual Report FY 2009/2010



◆ - 0 - 6 Months	21	21	39	23	10	14	66	42	17	21
■ - > 7 Months	87	40	25	28	18	34	32	47	30	35
▲ - Total	108	61	64	51	28	48	98	89	47	56

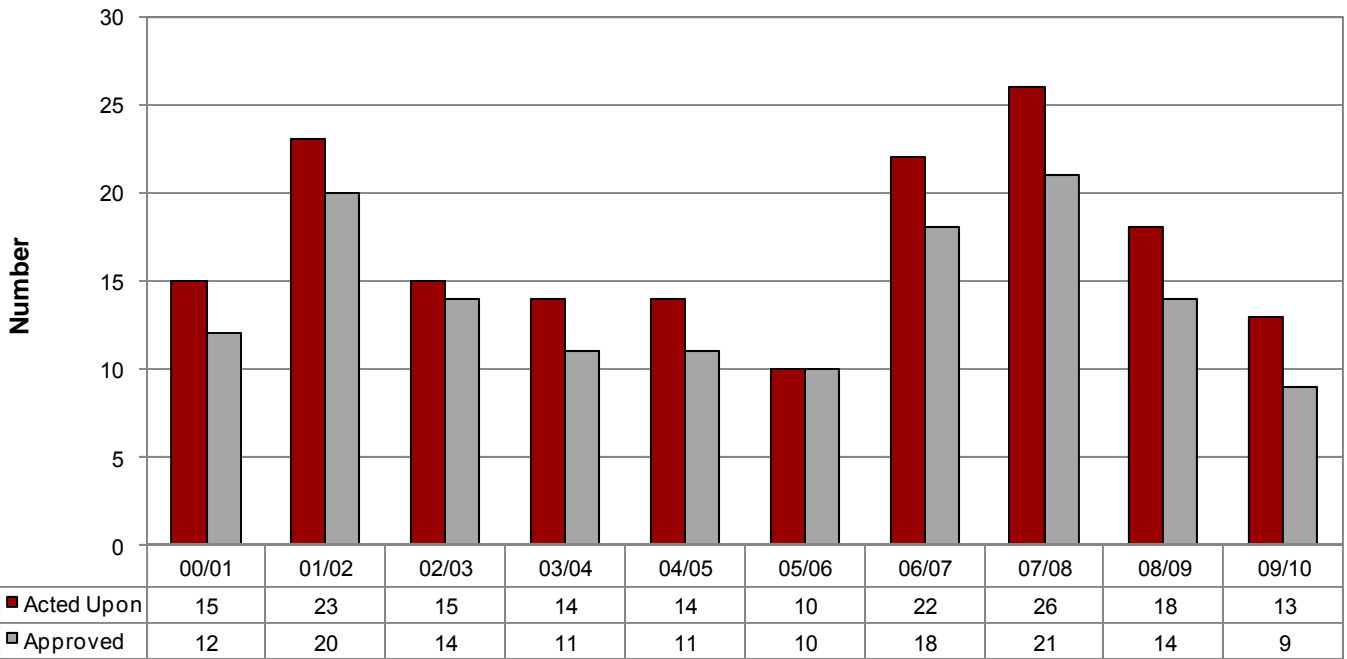
**P4: # Pending Recommendations**  
Annual Quarter Report FY 2009/2010



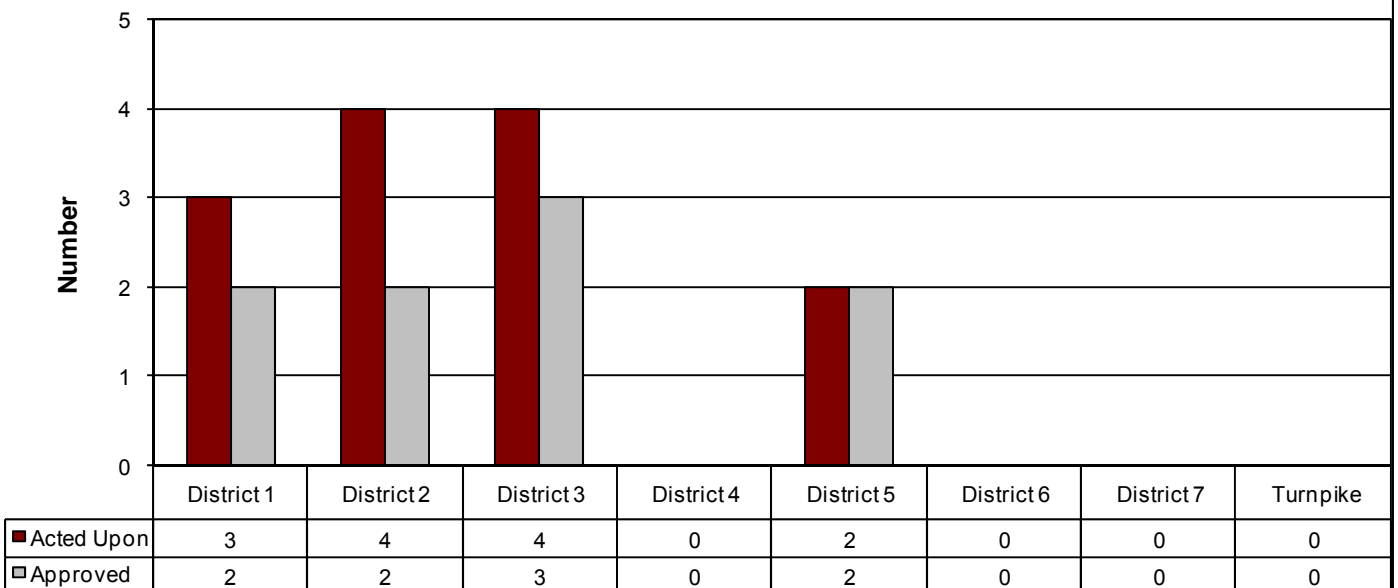
■ 0 - 3 Months	0	0	0	0	3	8	0	10
■ 4 - 6 Months	0	0	0	0	0	0	0	0
■ 7 - 12 Months	0	0	0	1	1	0	1	0
■ > 12 Months	0	17	5	0	2	2	0	6

# VECP Summary

## Q1: Annual VECP's Acted Upon

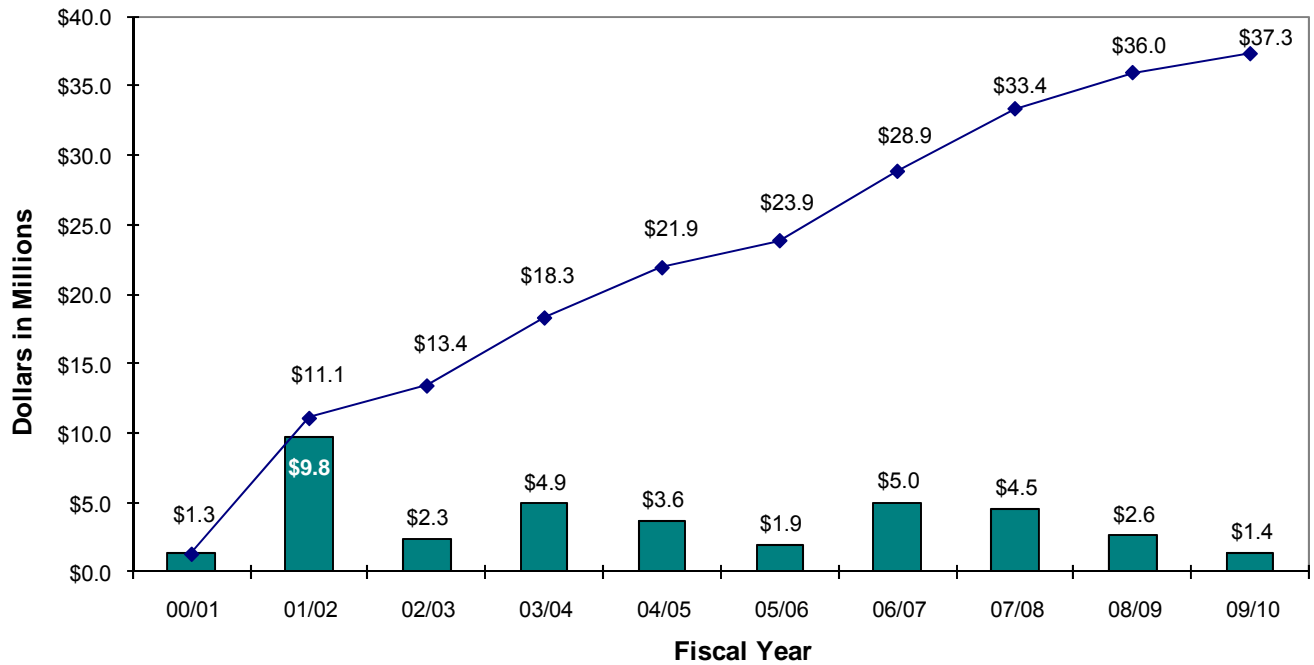


## Q1: VECP's Acted Upon Annual Report Fiscal Year 2009/2010

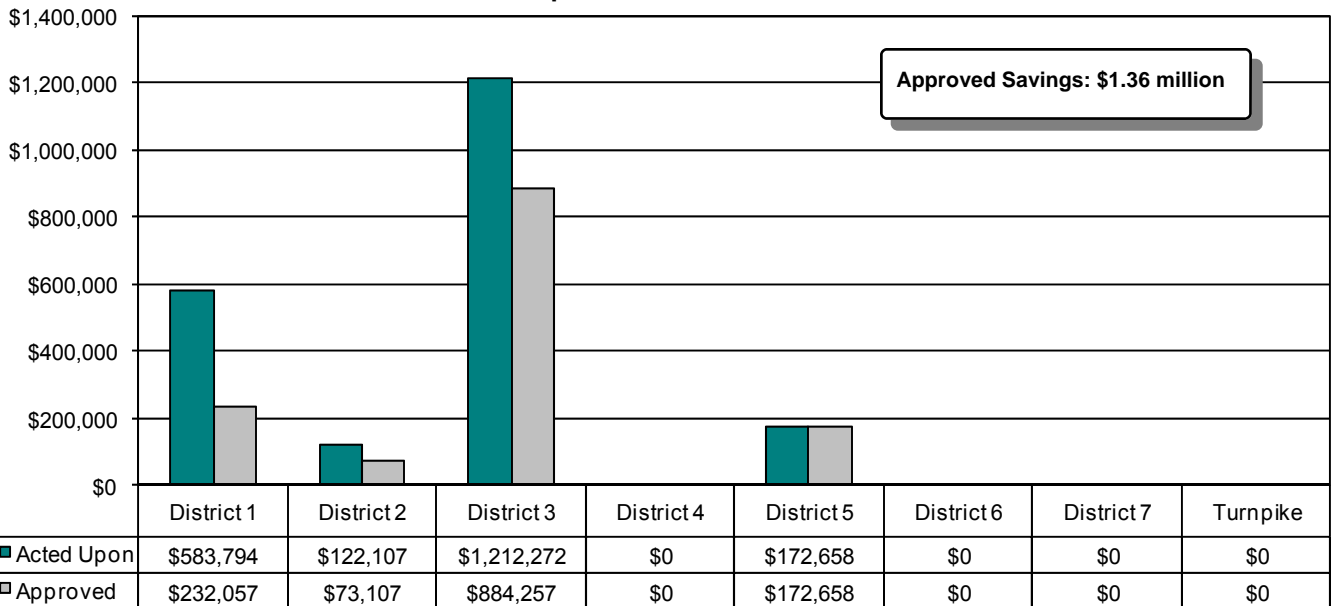


# VECP Approved Savings

## Q2: Cumulative VECP Construction Cost Savings



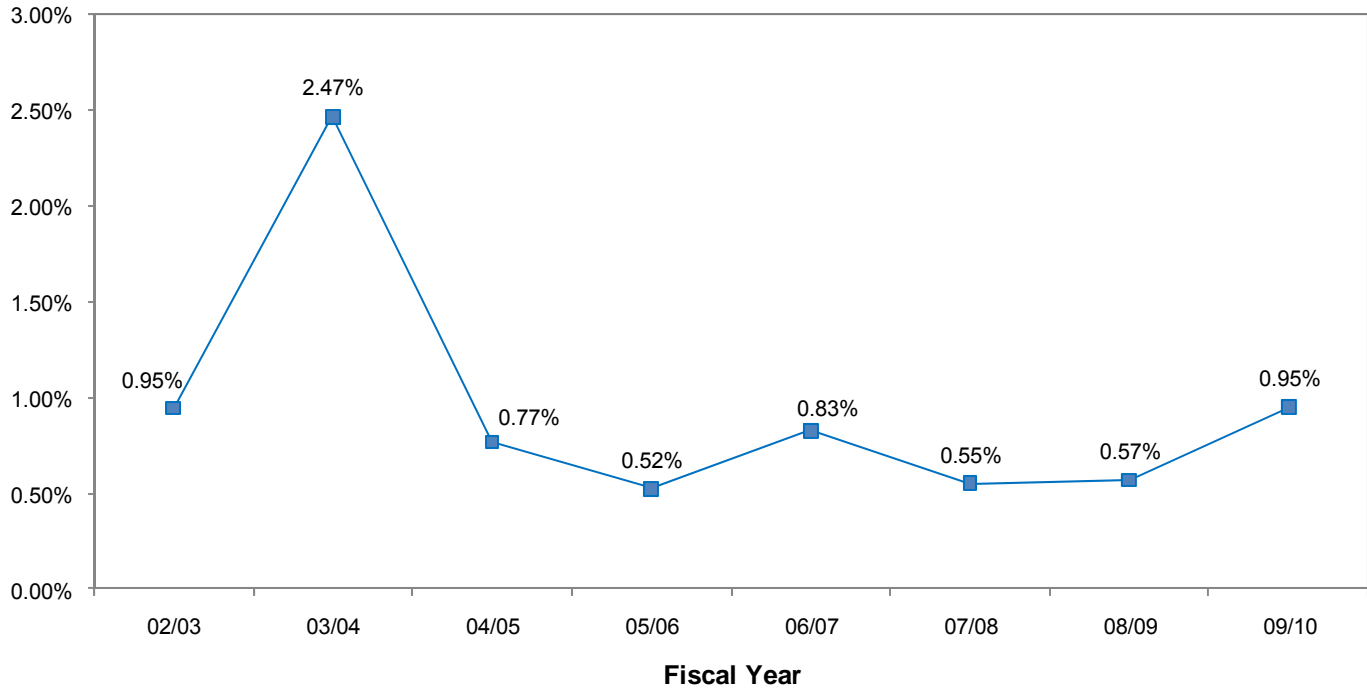
## Q2: Approved VECP Savings Annual Report Fiscal Year 2009/2010



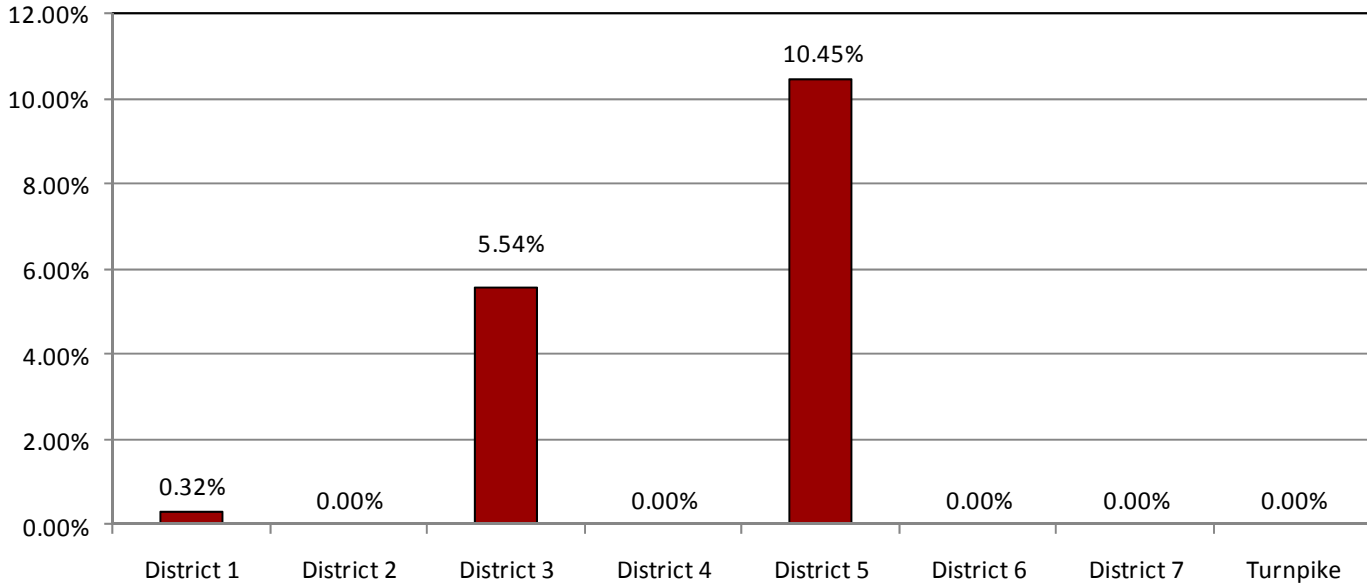


# VECP Percent Project Saved

**Q3: VECP Annual Percent Project Saved**



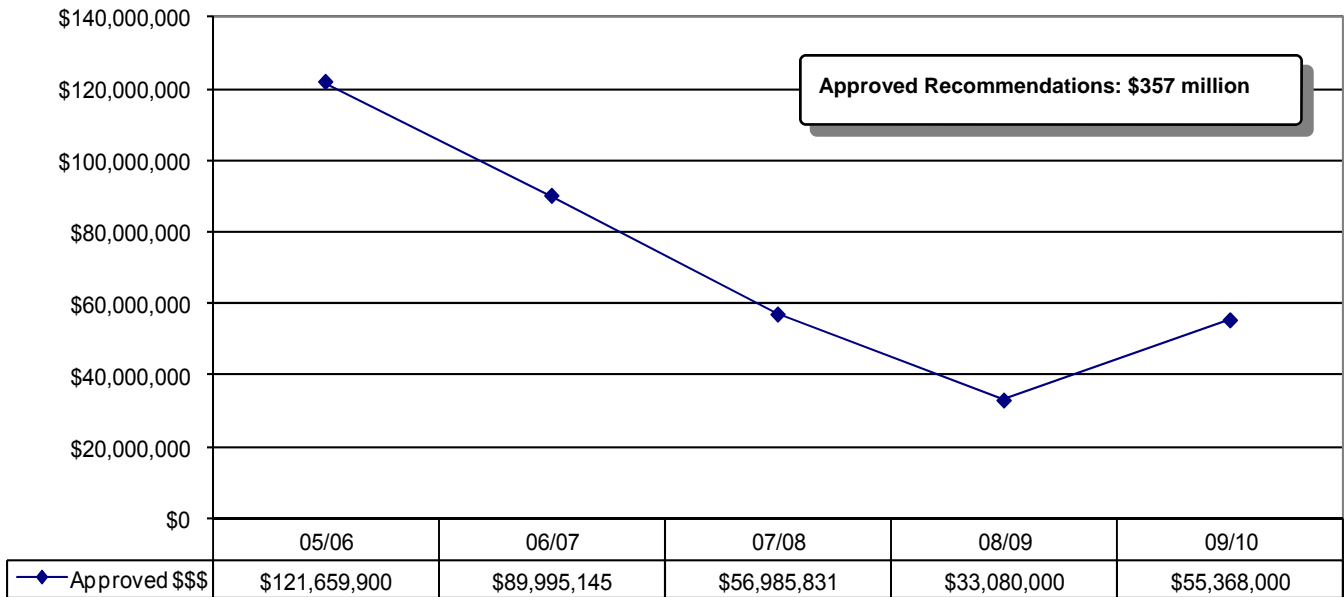
**Q4: VECP Percent Project Saved  
Annual Report Fiscal Year 2009/2010**



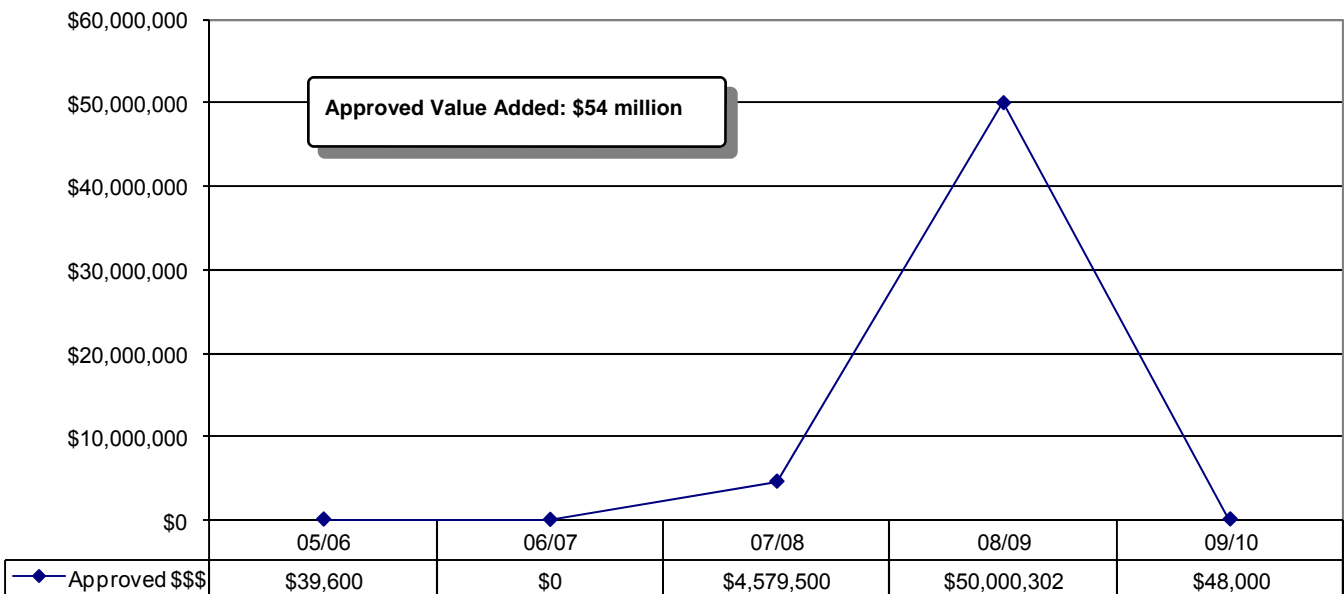
Appendix A  
5 year History  
Annual Performance Measures  
by District

# District 1

**Q1: Annual Approved Cost Avoidance/Savings  
District 1**

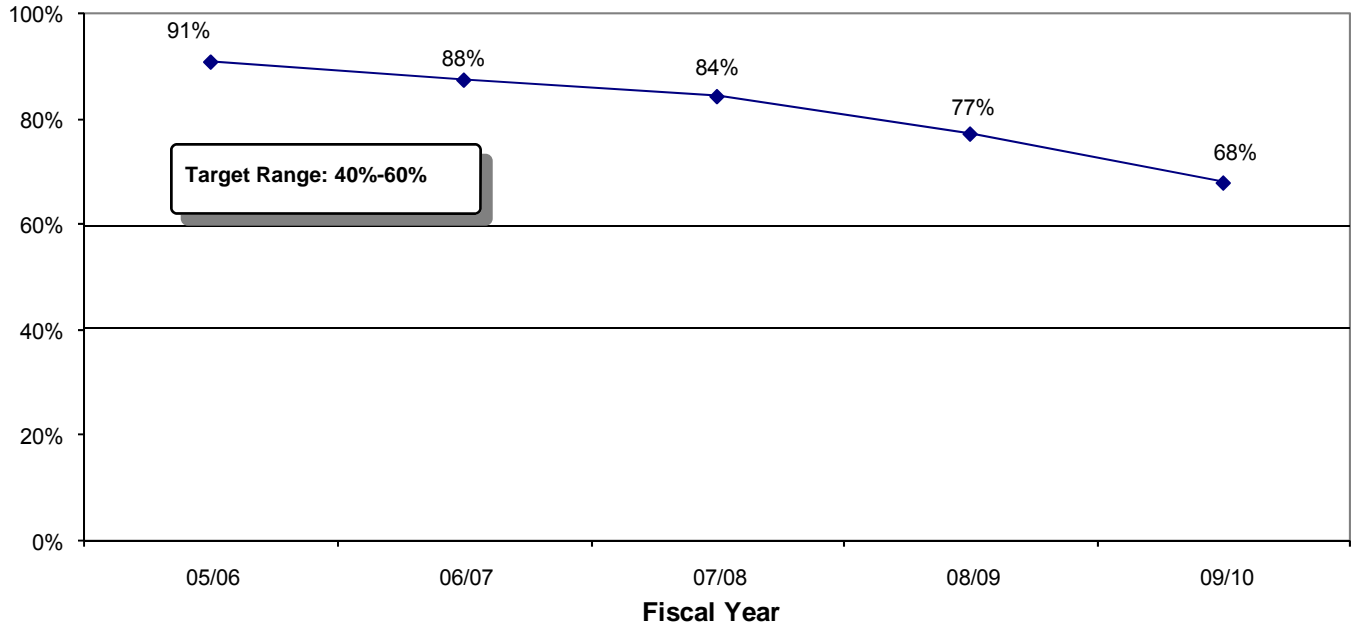


**Q2: Annual Approved Value Added Recommendations  
District 1**

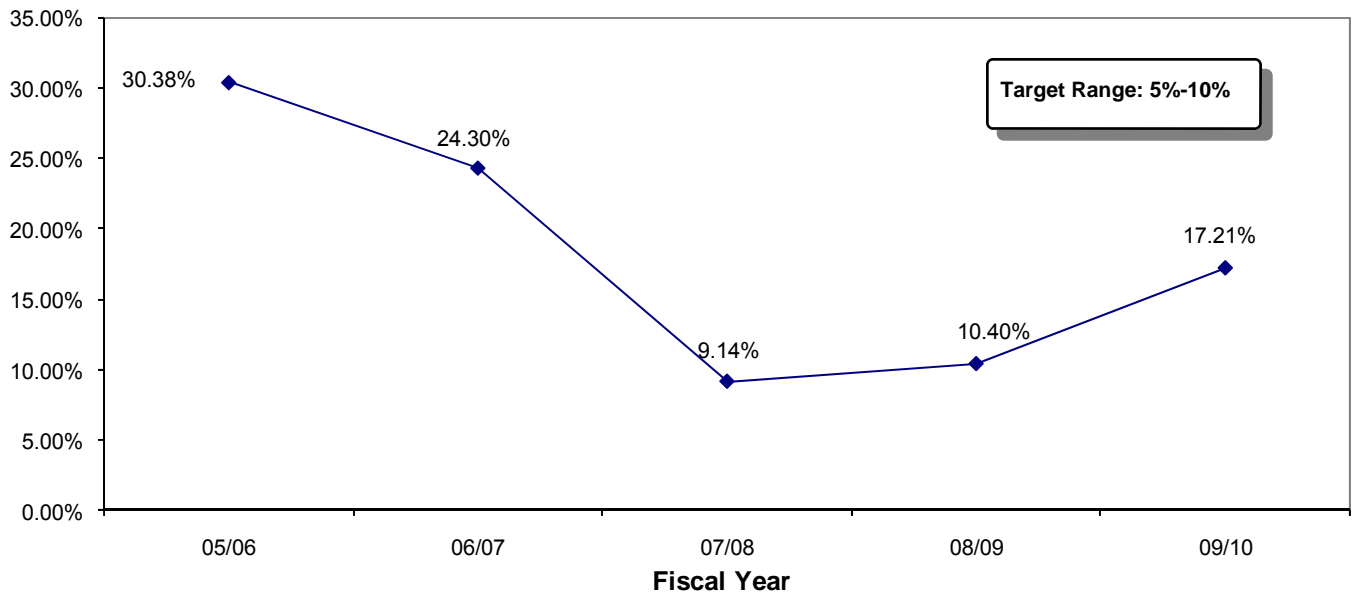


# District 1

### Q3: Annual Adoption Rate District 1

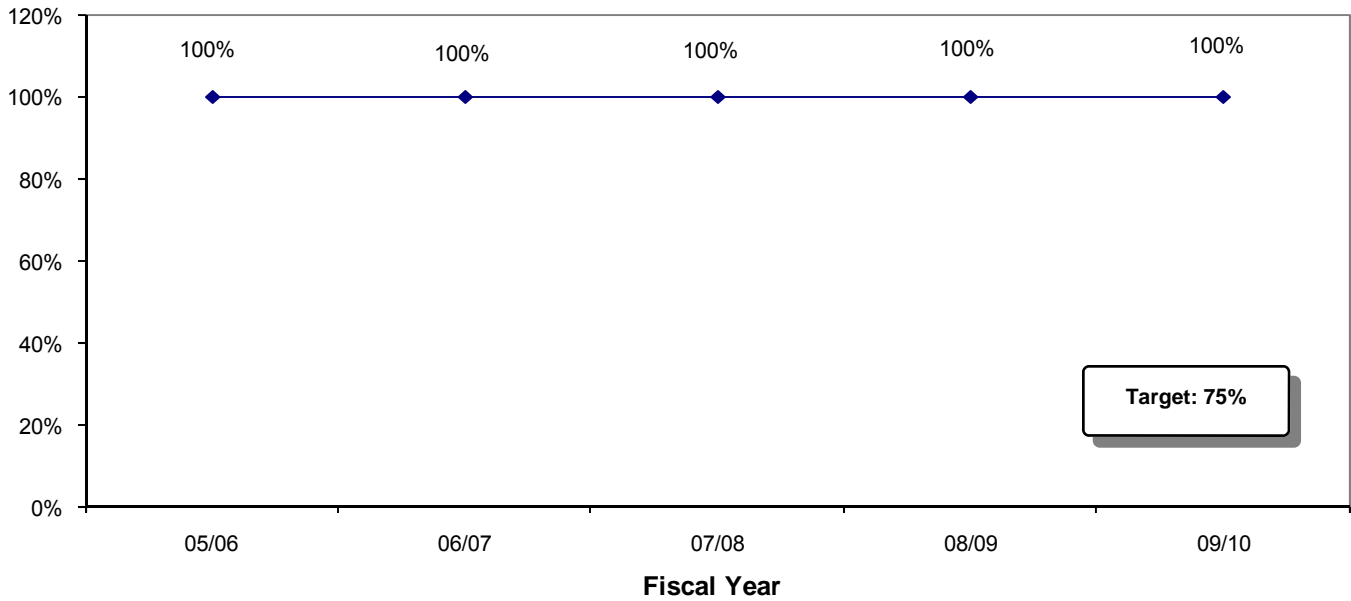


### Q4: Annual Percent Project Saved District 1

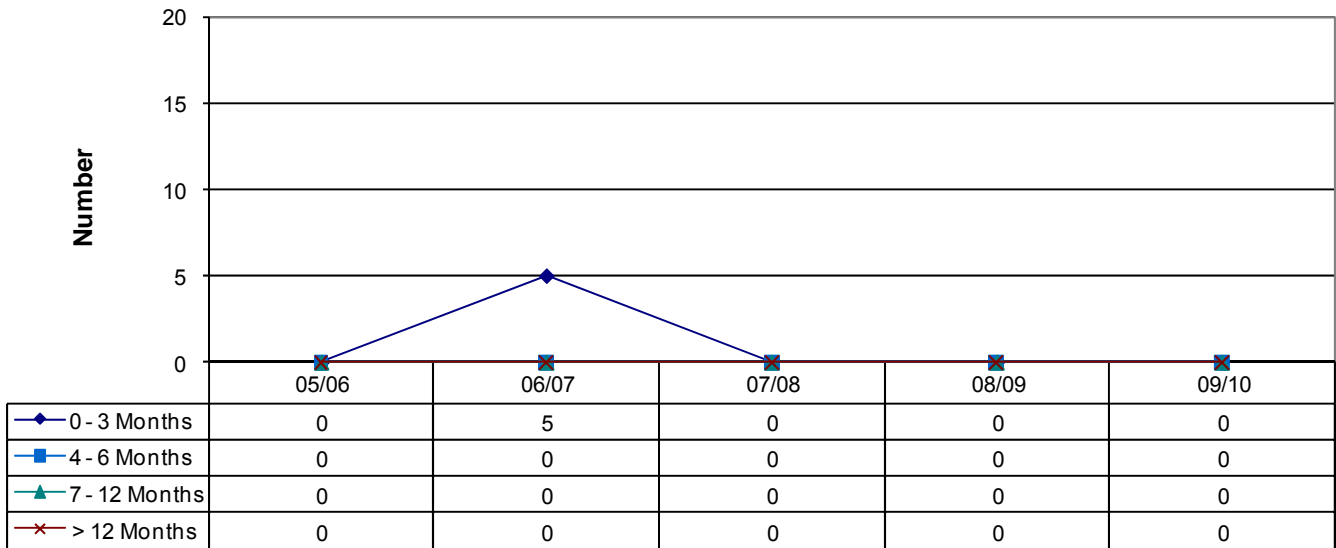


# District 1

**P1: % Scheduled VE Studies Completed**  
District 1

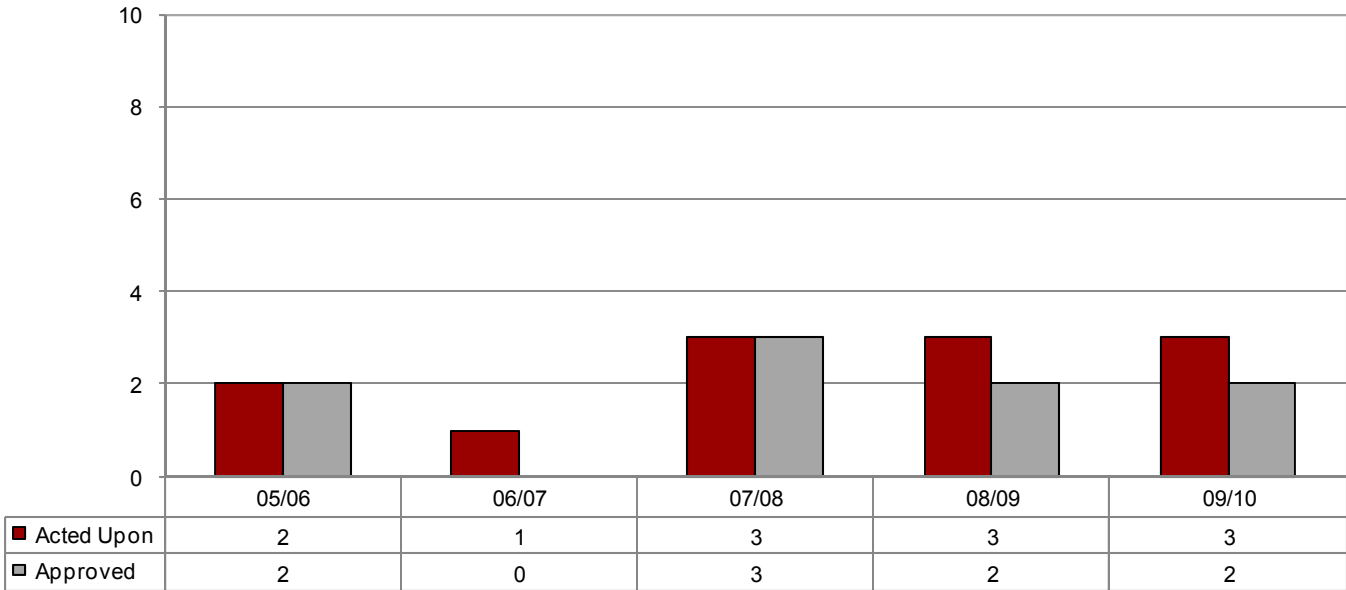


**P4: Annual # Pending Recommendations**  
District 1

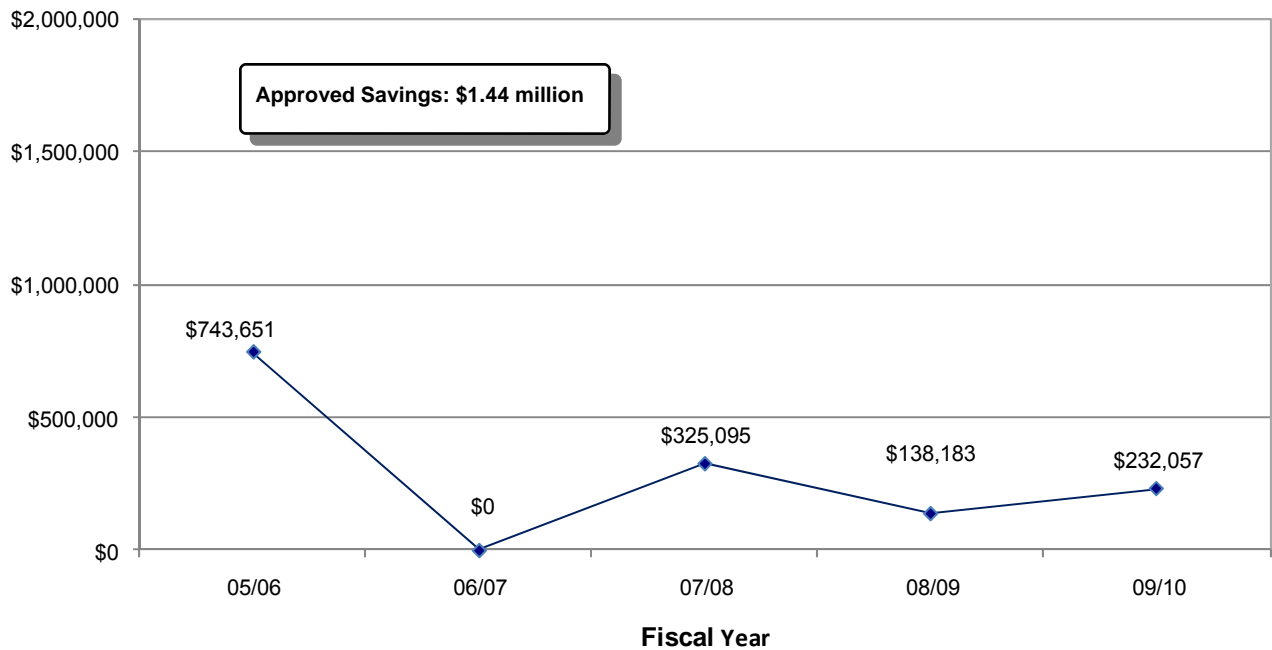


# District 1

## Q1: Annual VECP's Acted Upon

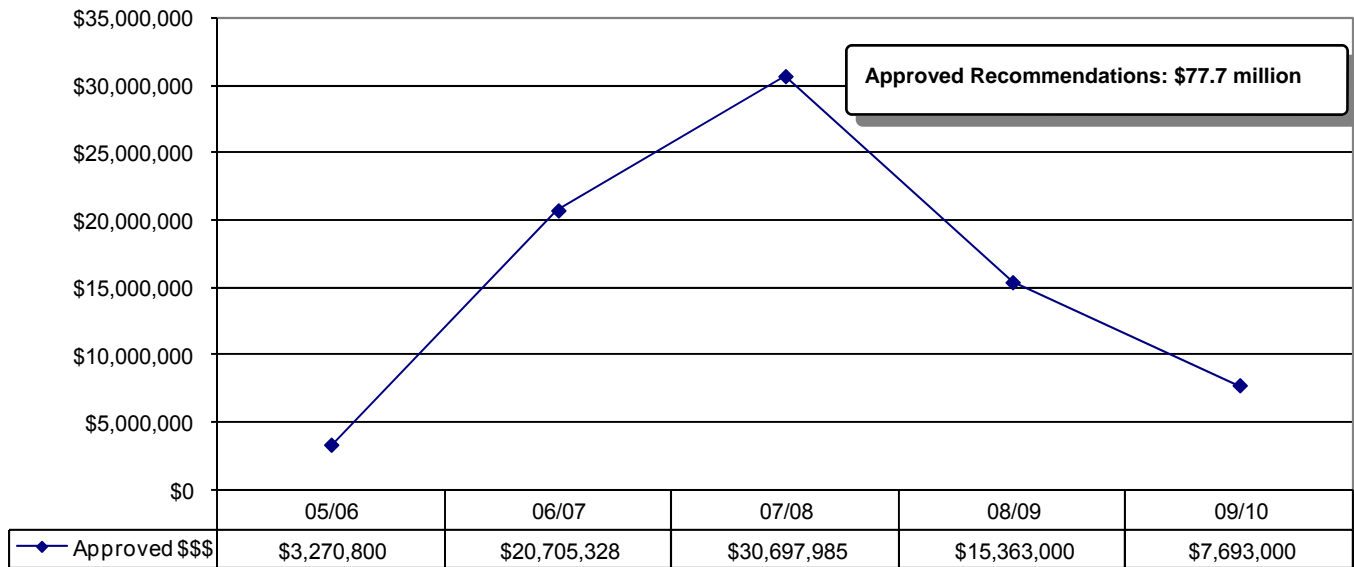


## Q2: Annual Approved VECP Savings

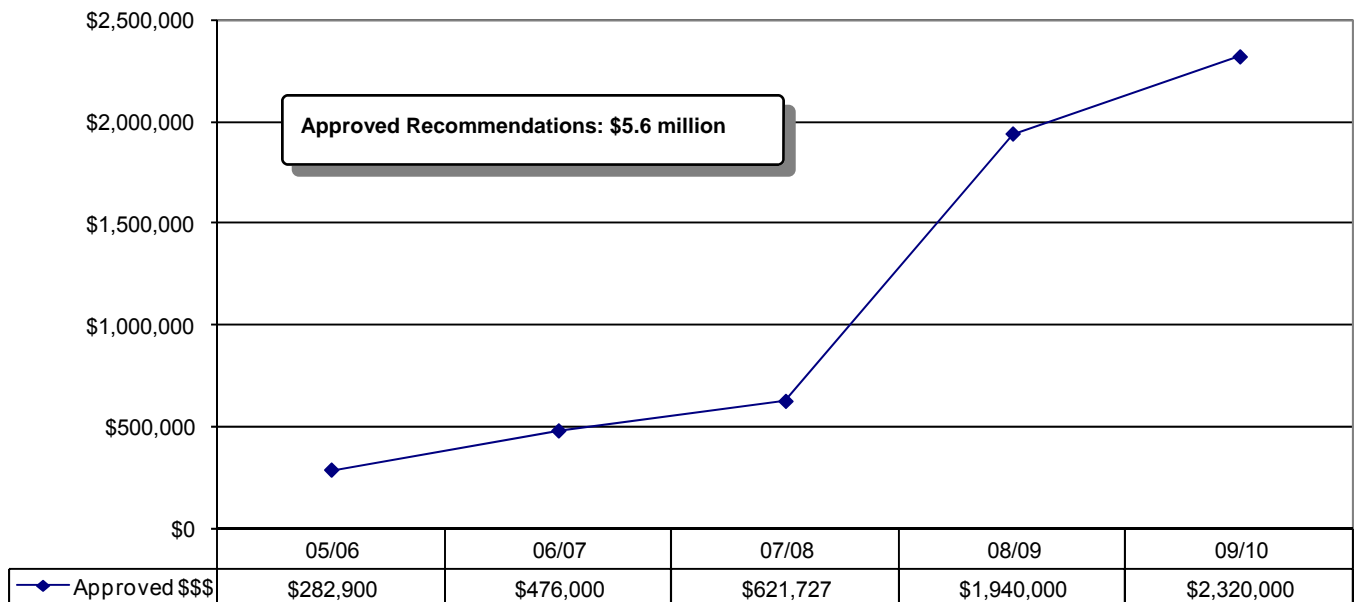


# District 2

**Q1: Annual Approved Cost Avoidance/Savings  
District 2**

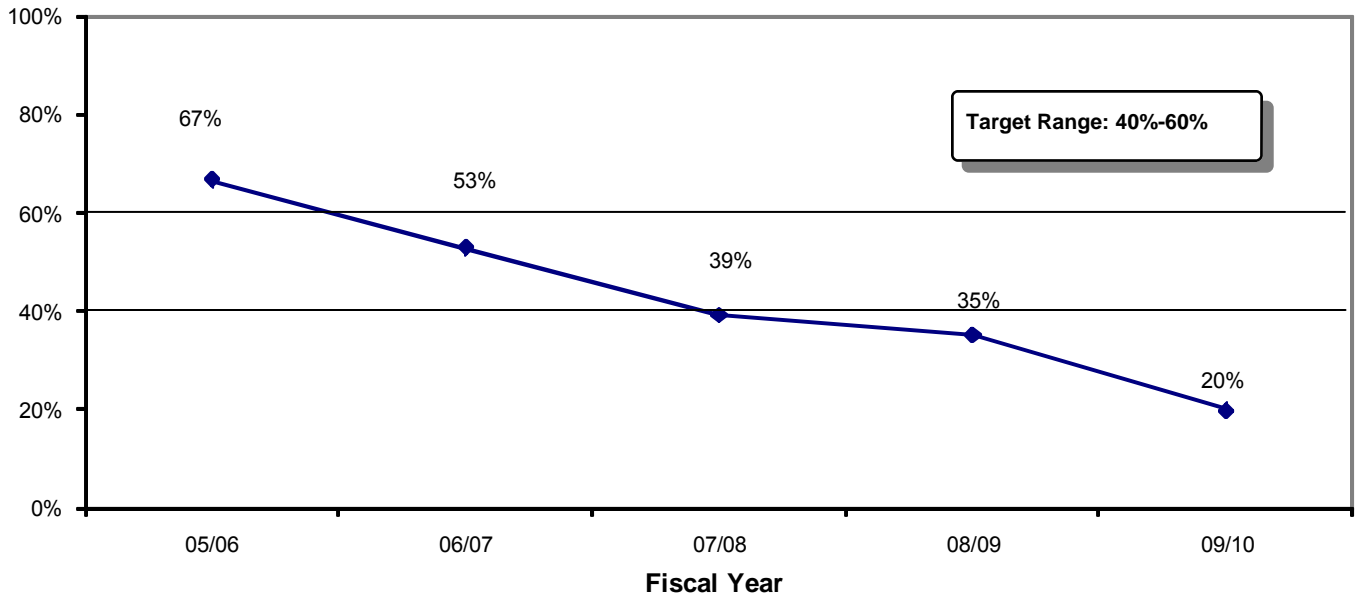


**Q2: Annual Approved Value Added Recommendations  
District 2**

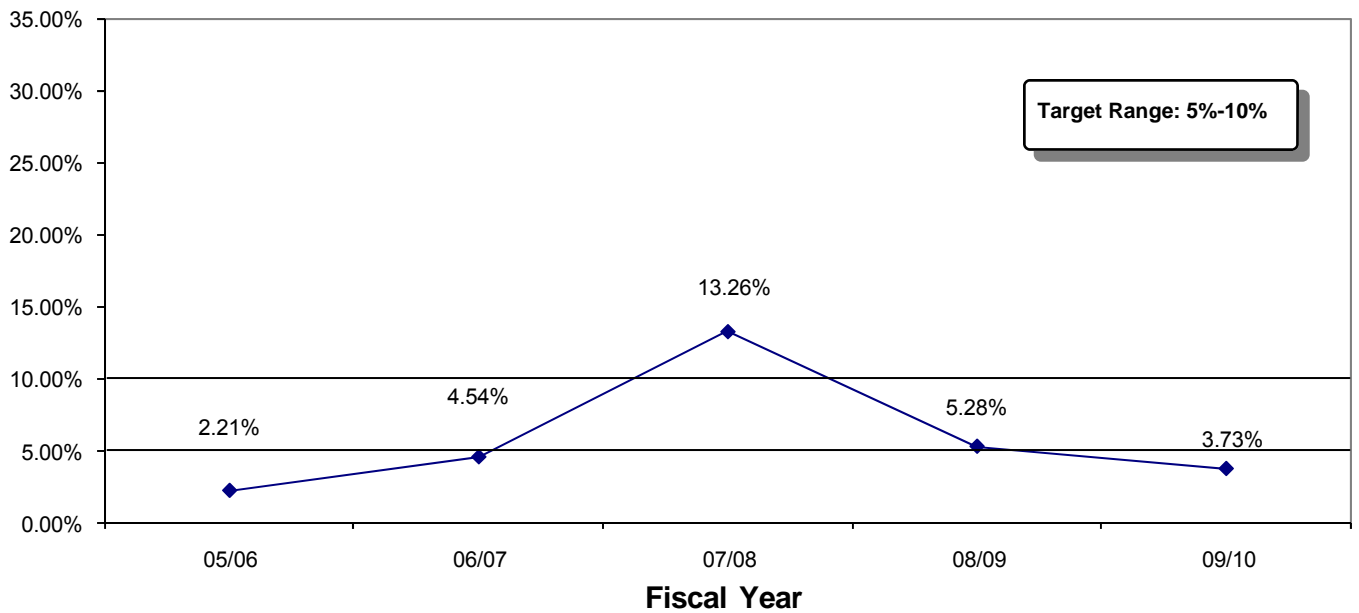


# District 2

### Q3: Annual Adoption Rate District 2



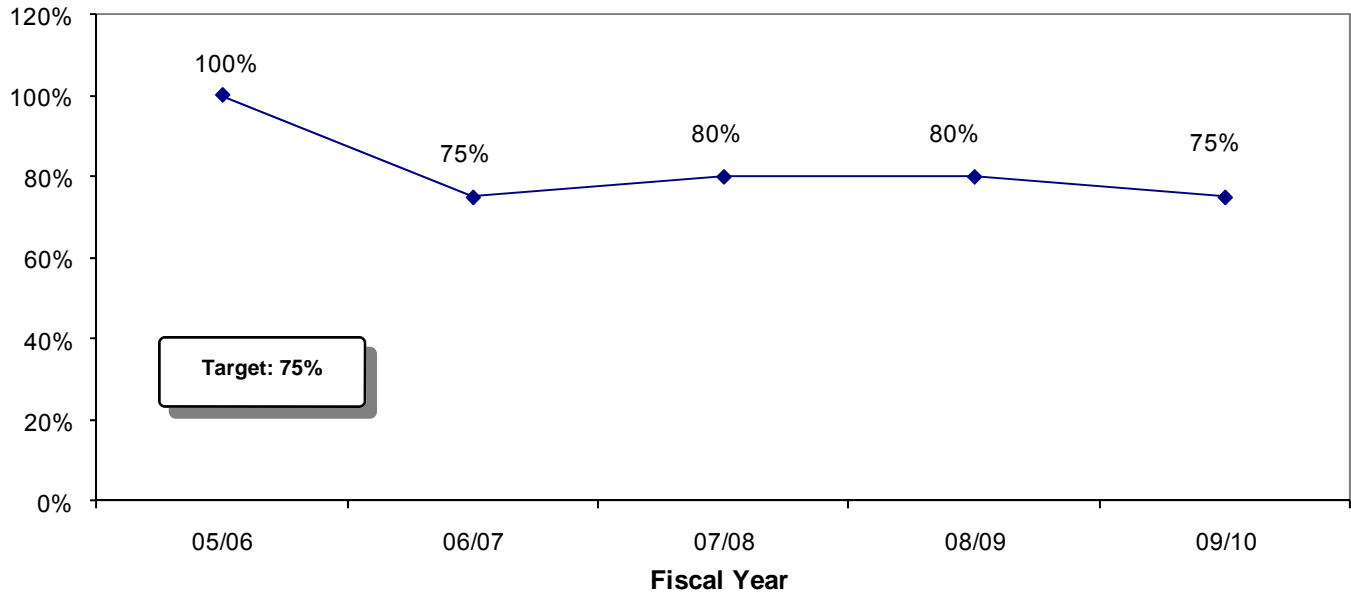
### Q4: Annual Percent Project Saved District 2



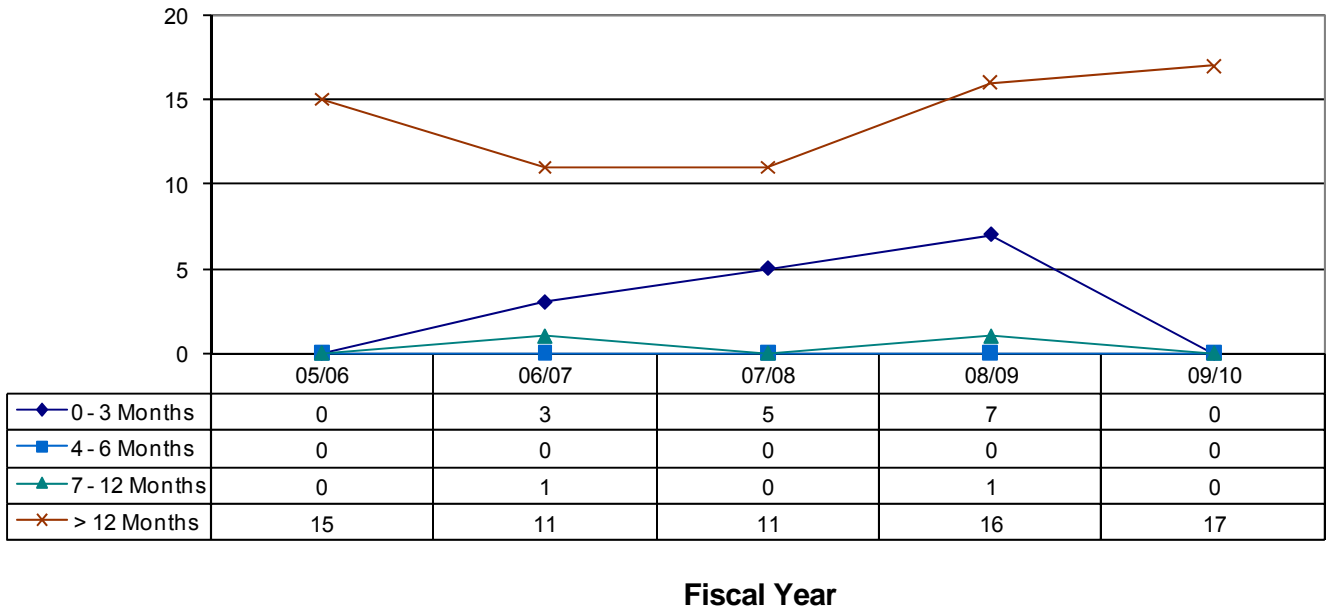


# District 2

**P1: % Scheduled VE Studies Completed  
District 2**

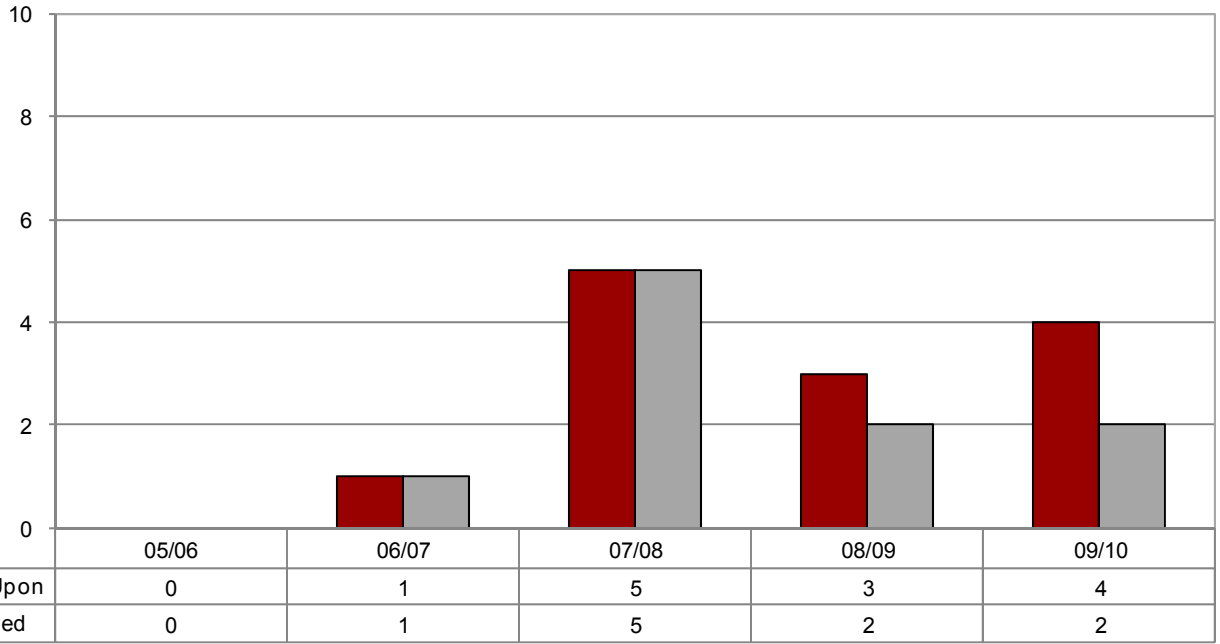


**P4: Annual # Pending Recommendations  
District 2**

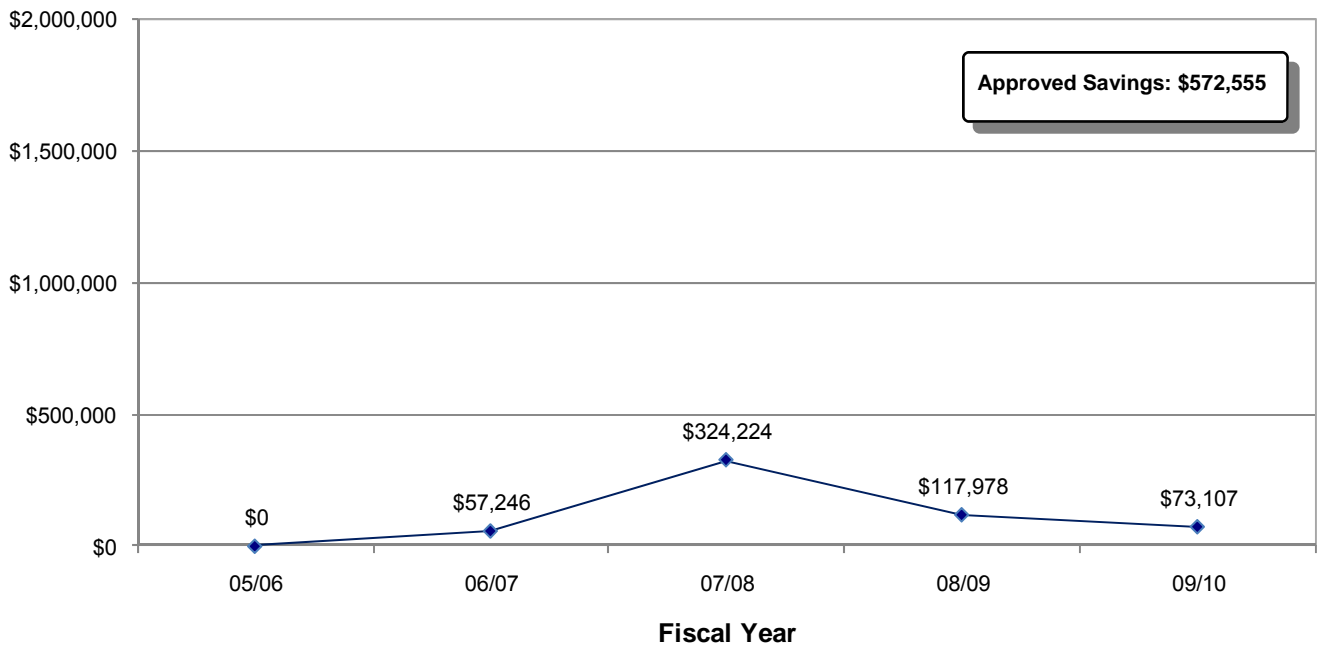


# District 2

## Q1: Annual VECP's Acted Upon

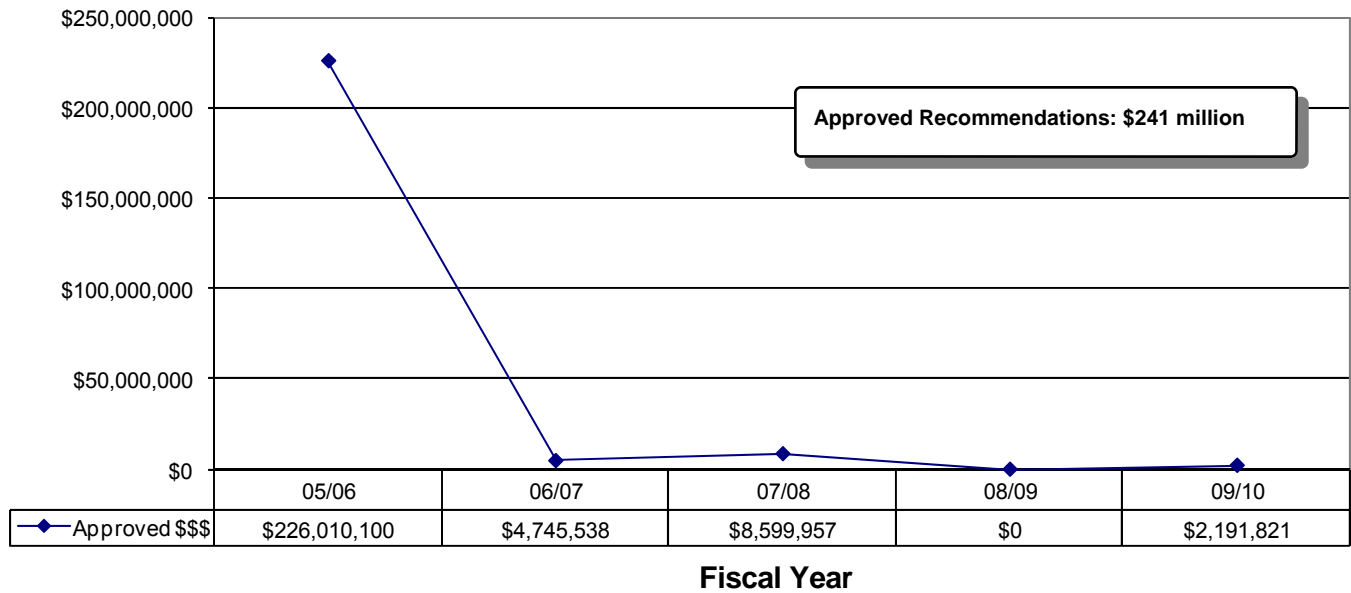


## Q2: Annual Approved VECP Savings

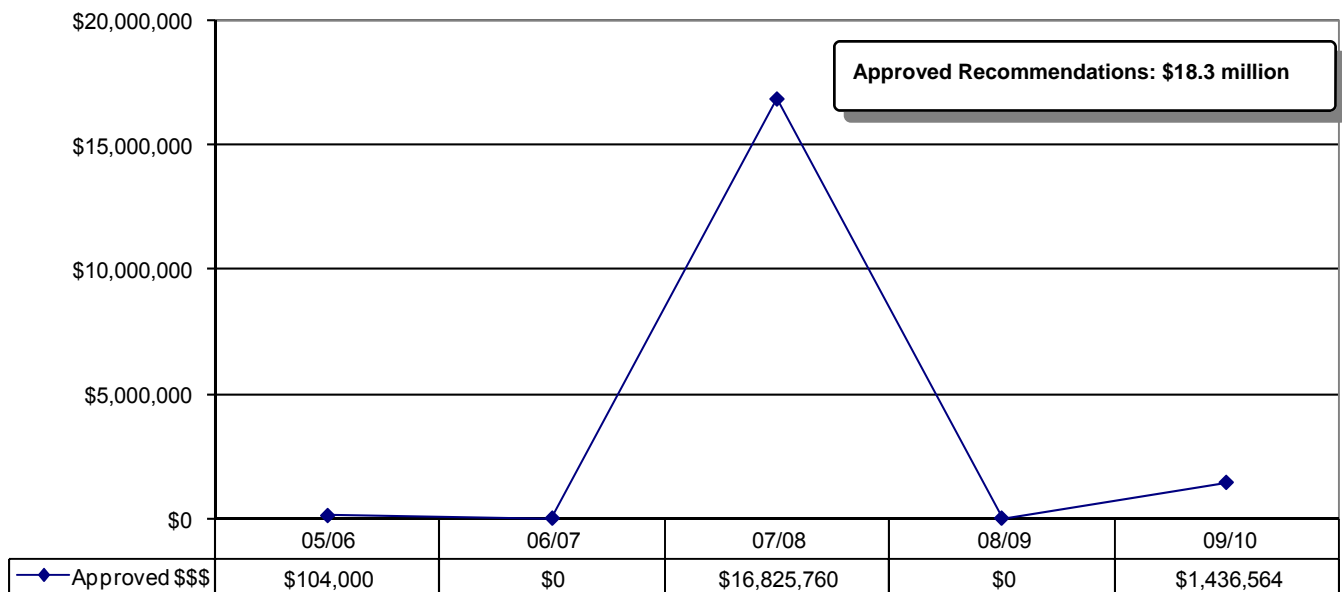


# District 3

**Q1: Annual Approved Cost Avoidance/Savings**  
District 3

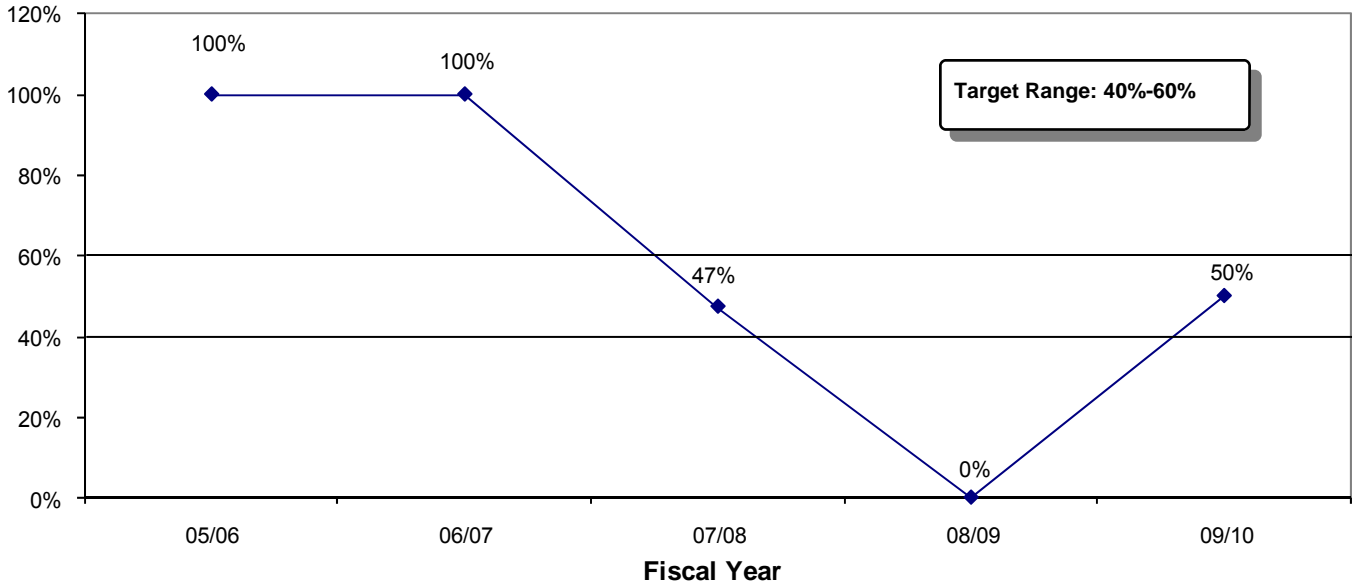


**Q2: Annual Approved Value Added Recommendations**  
District 3

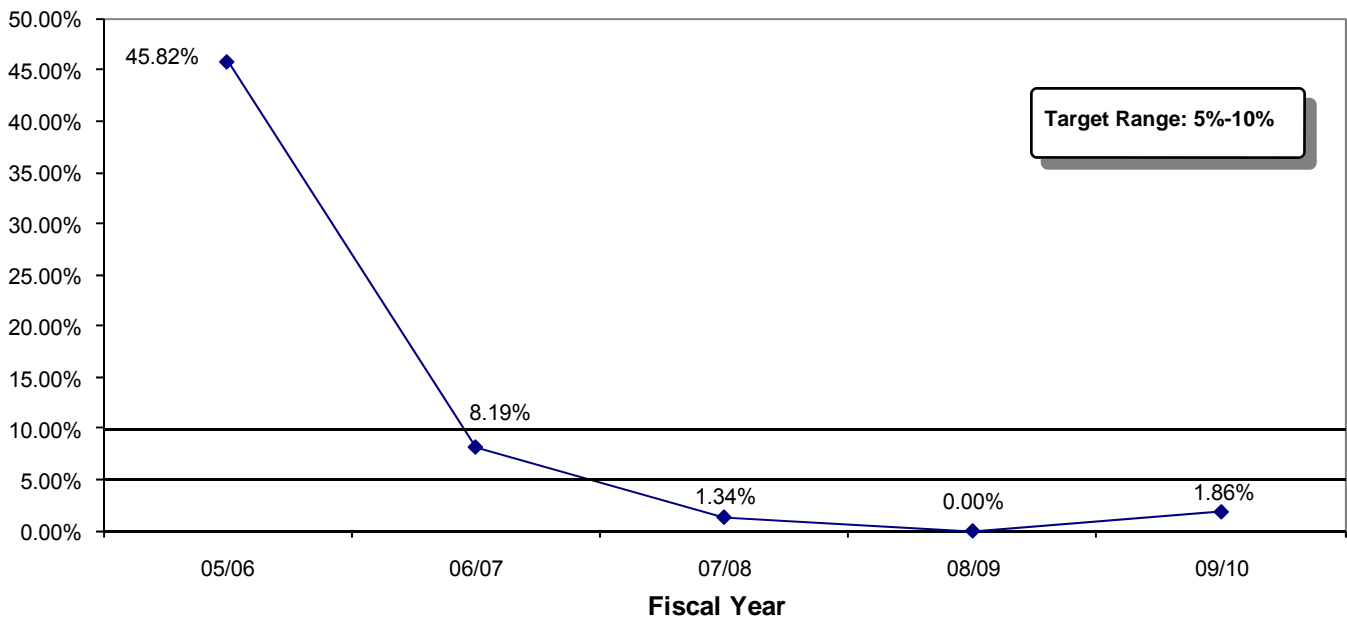


# District 3

### Q3: Annual Adoption Rate District 3

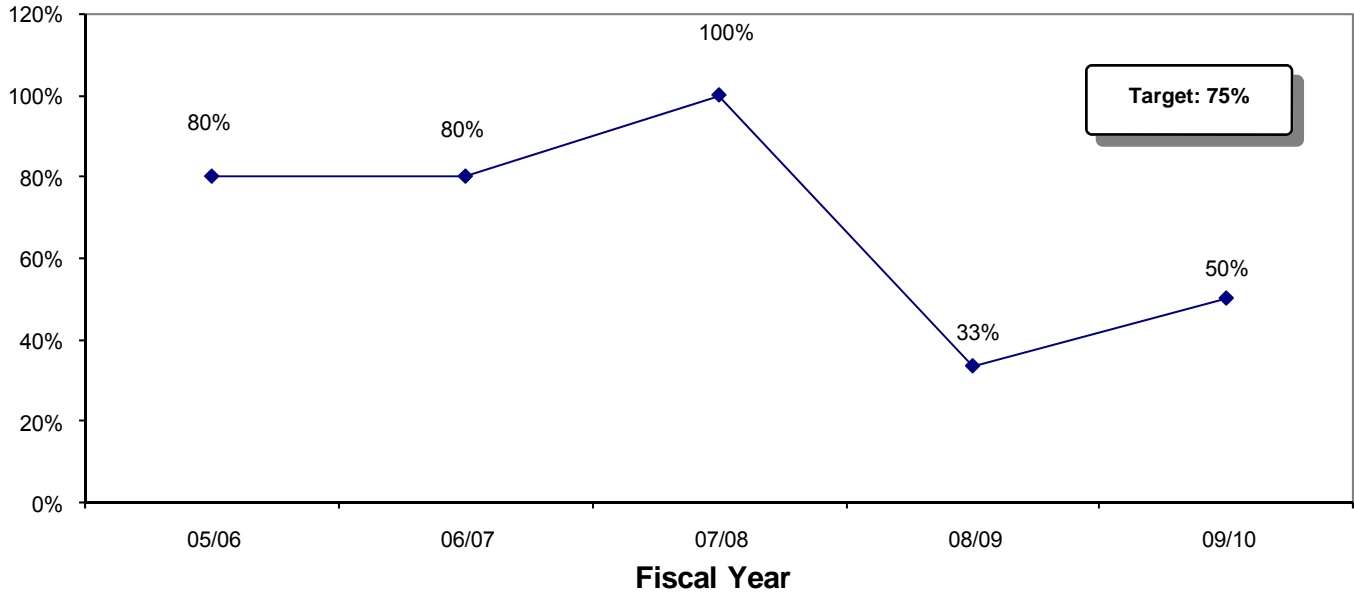


### Q4: Annual Percent Project Saved District 3

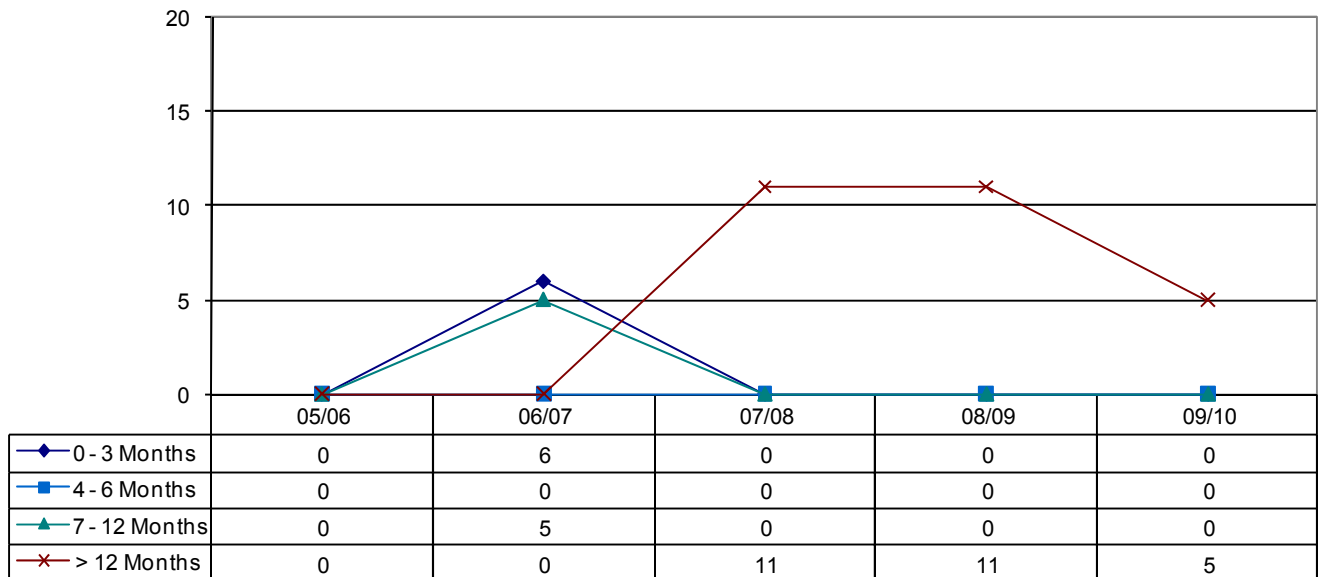


# District 3

**P1: % Scheduled VE Studies Completed**  
District 3

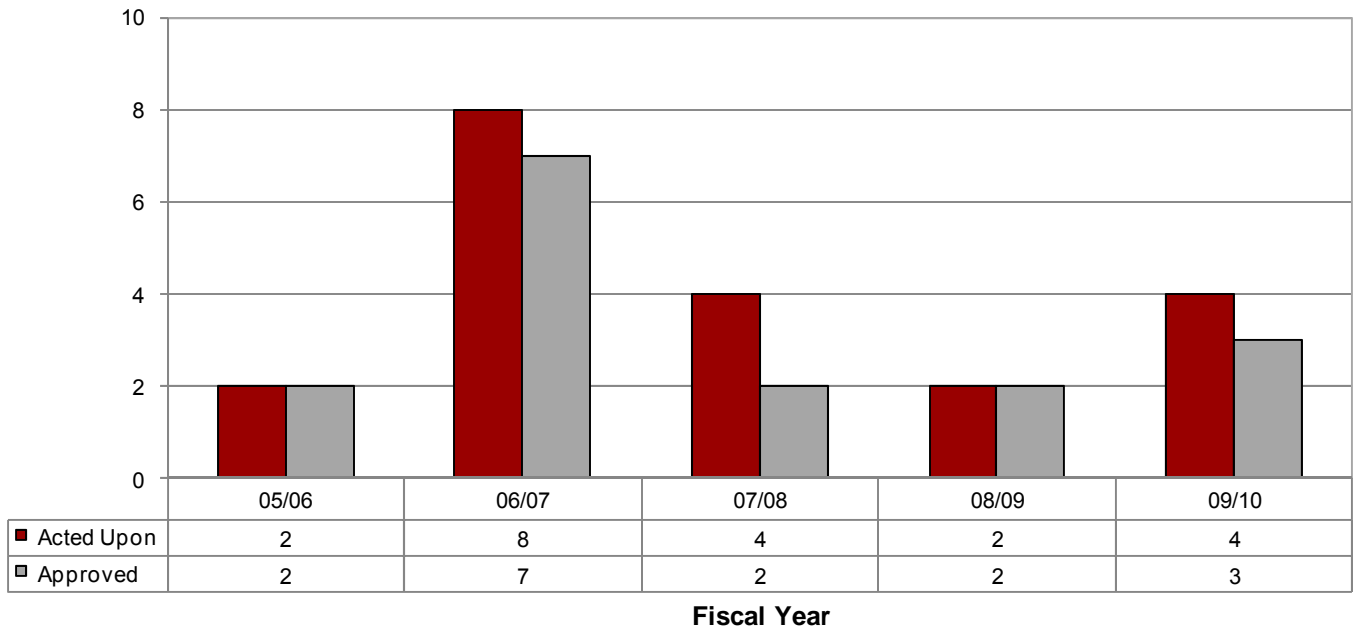


**P4: Annual # Pending Recommendations**  
District 3

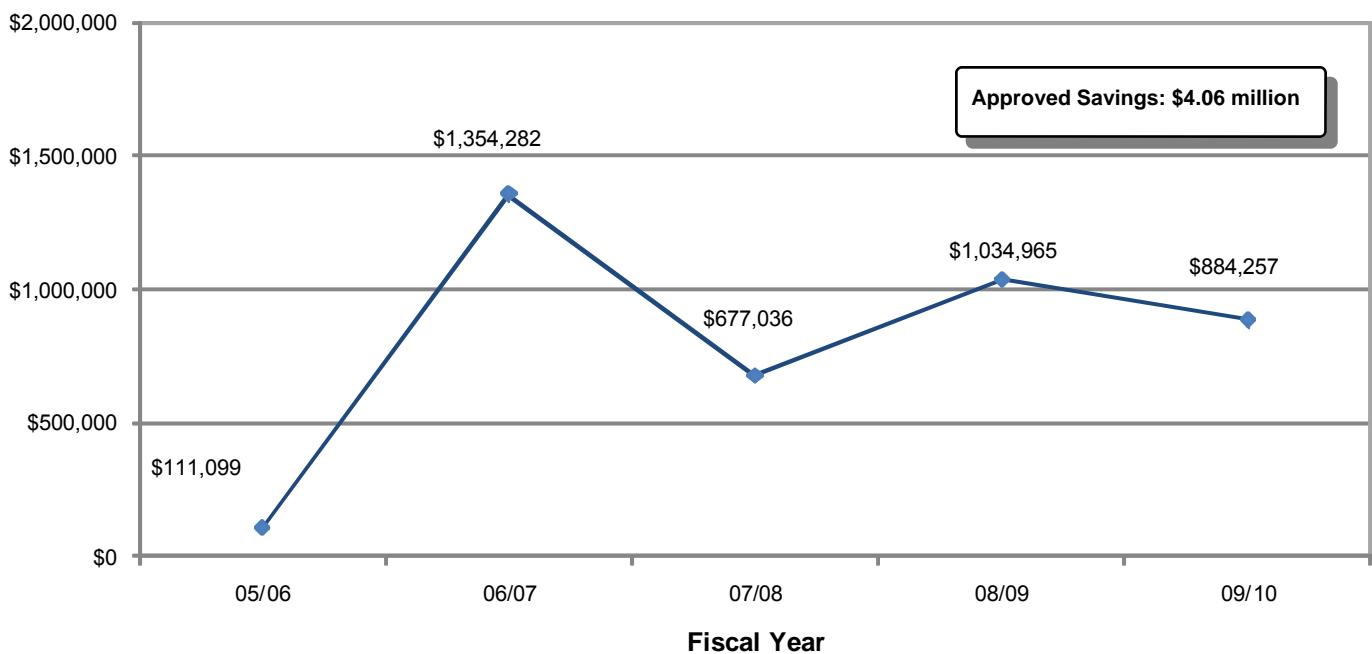


# District 3

## Q1: Annual VECP's Acted Upon

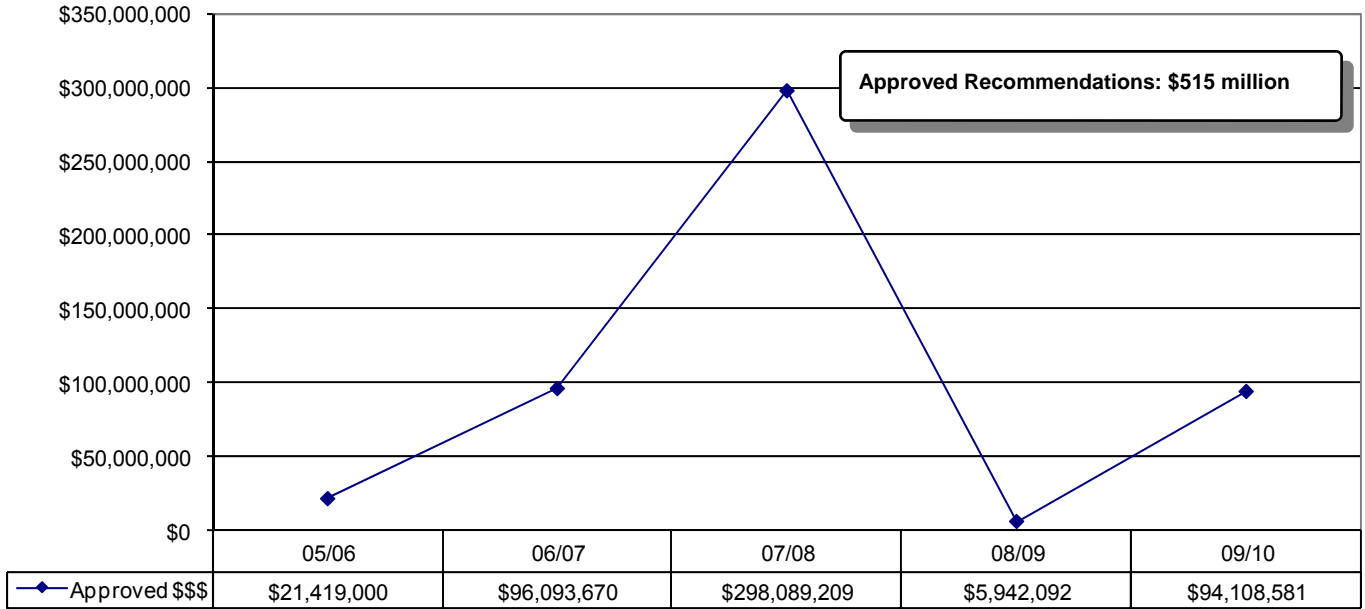


## Q2: Annual Approved VECP Savings

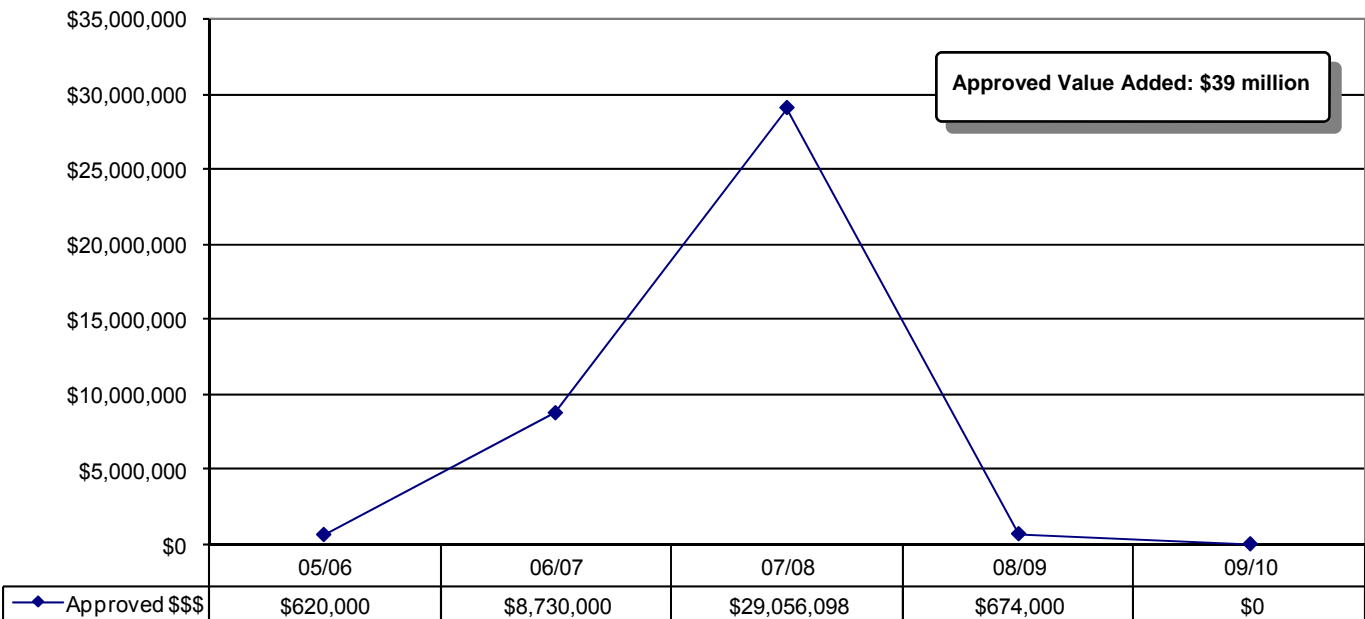


# District 4

**P1: Annual Approved Cost Avoidance/Savings**  
District 4

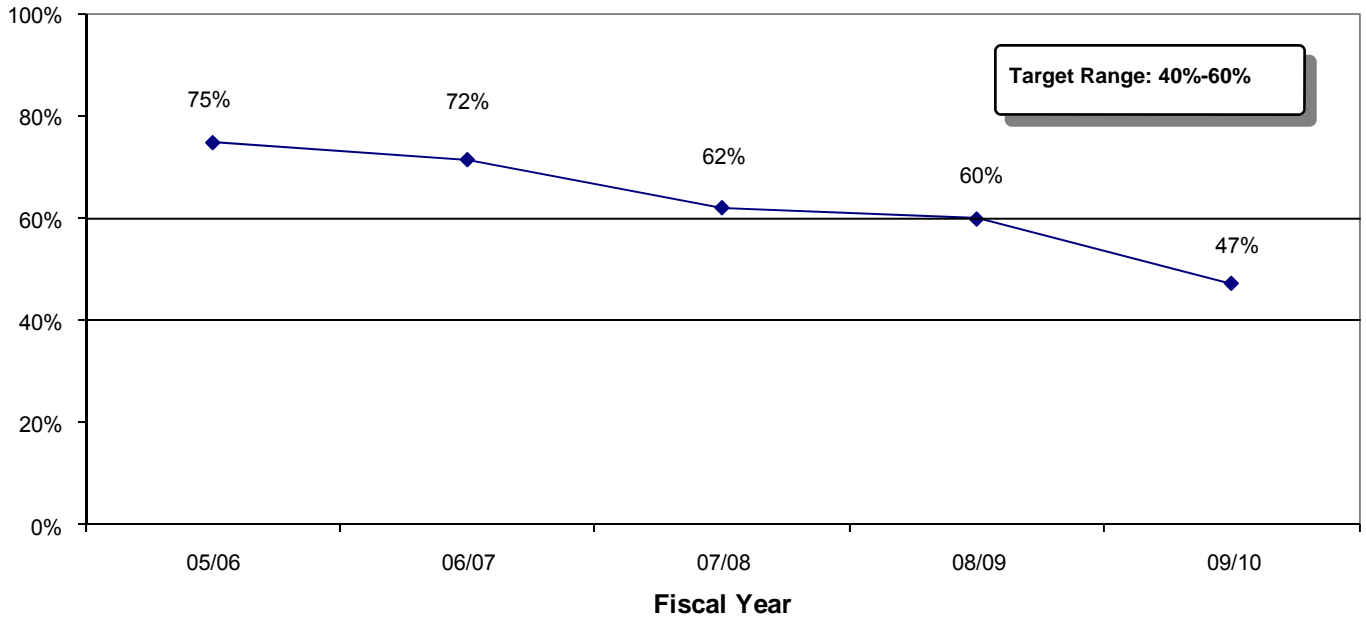


**Q2: Annual Approved Value Added Recommendations**  
District 4

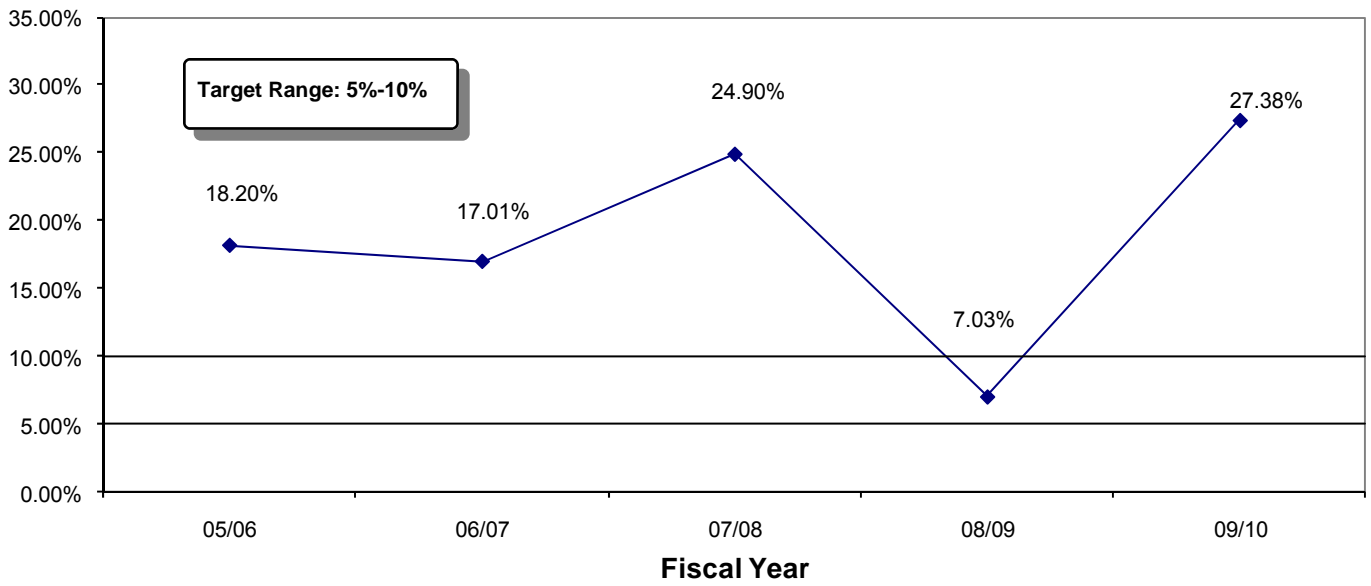


# District 4

### Q3: Annual Adoption Rate District 4



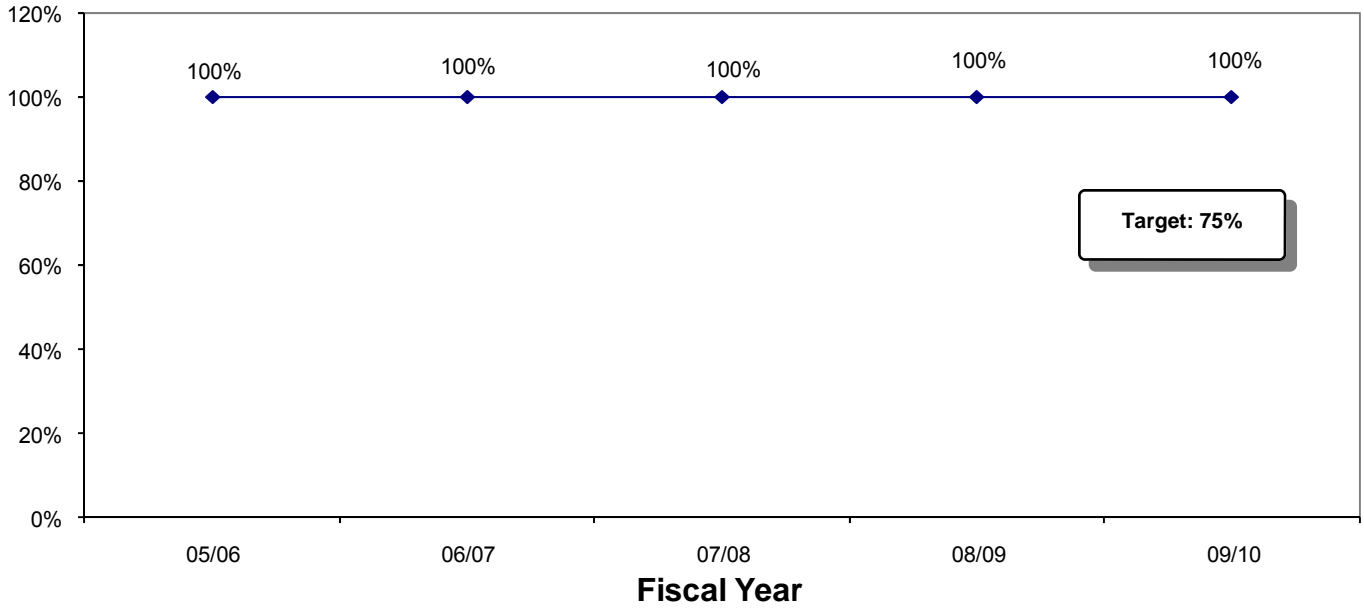
### Q4: Annual Percent Project Saved District 4



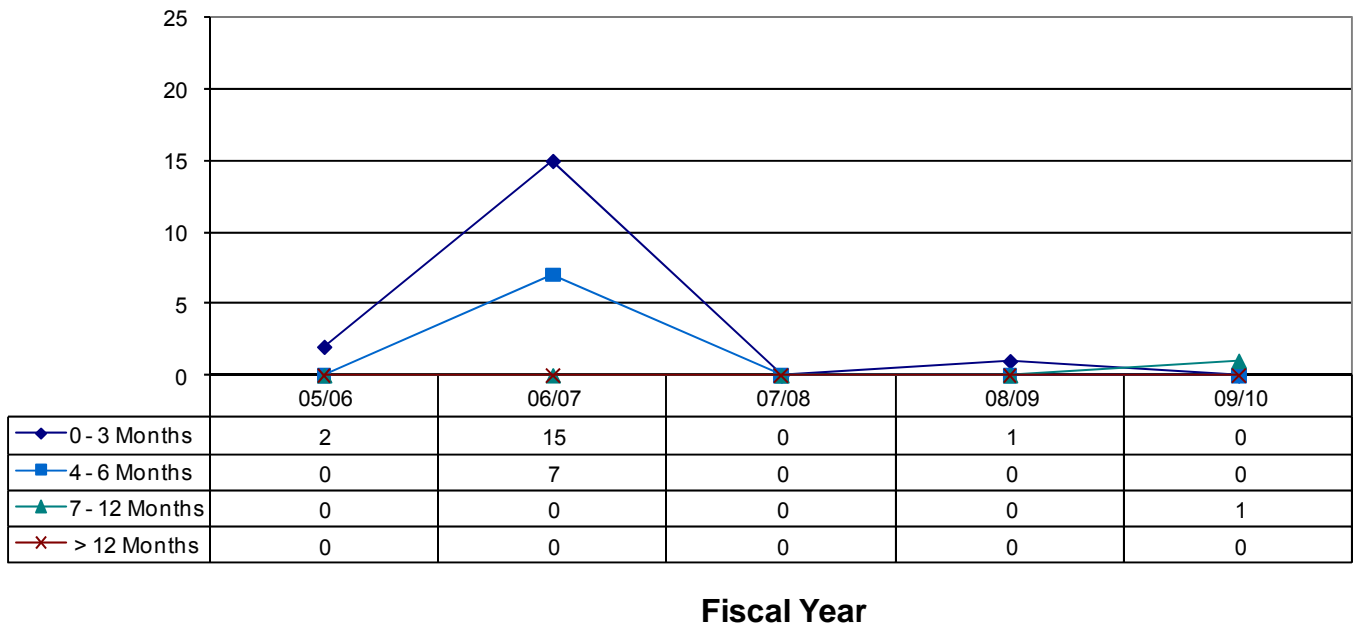


# District 4

**P1: % Scheduled VE Studies Completed**  
District 4

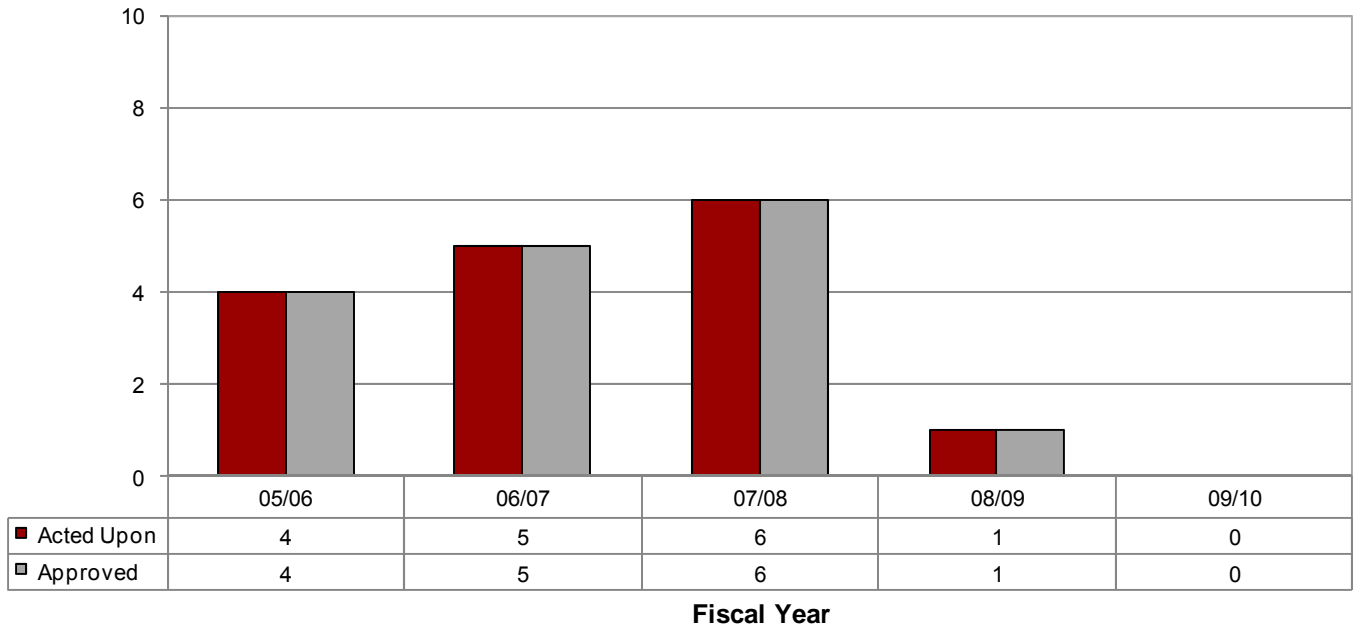


**P4: Annual # Pending Recommendations**  
District 4

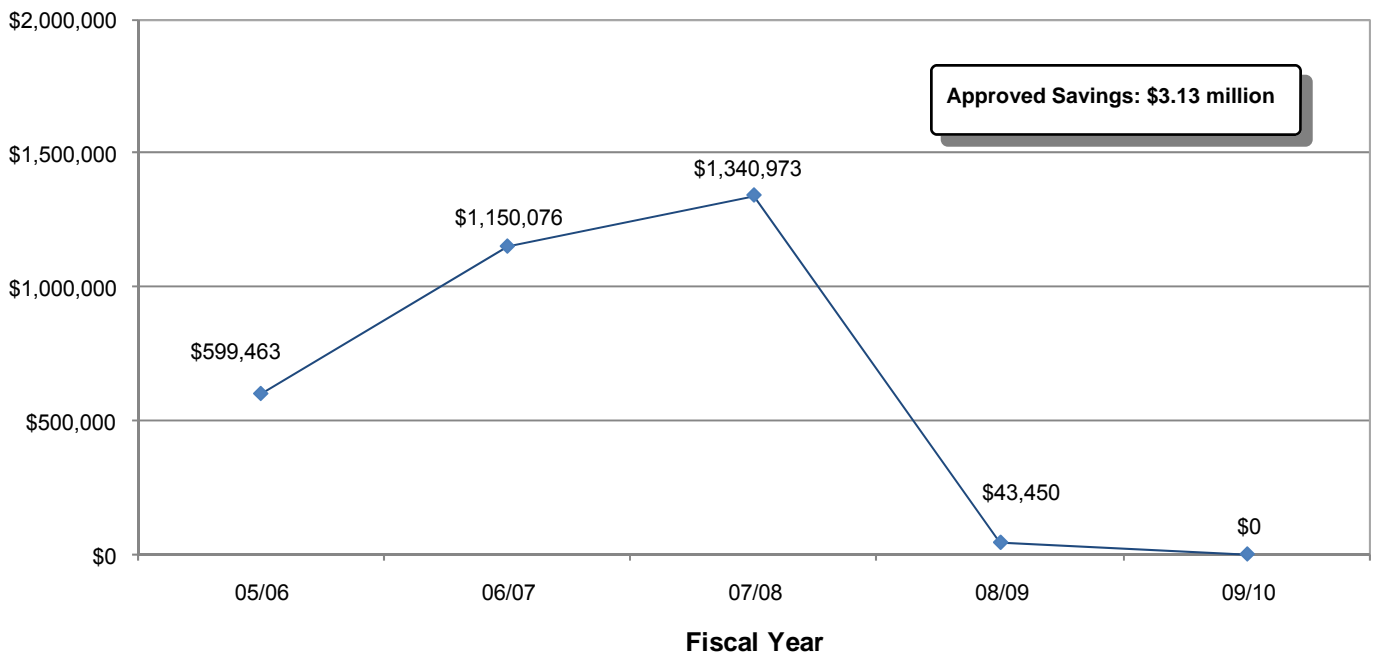


# District 4

### Q1: Annual VECP's Acted Upon

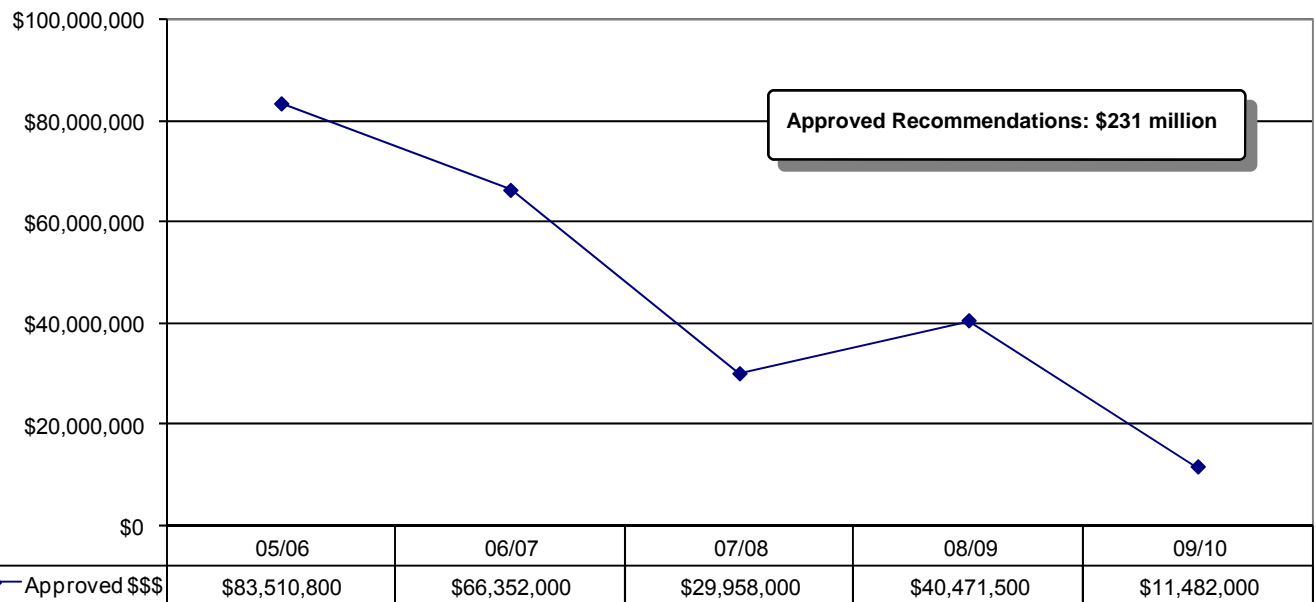


### Q2: Annual Approved VECP Savings

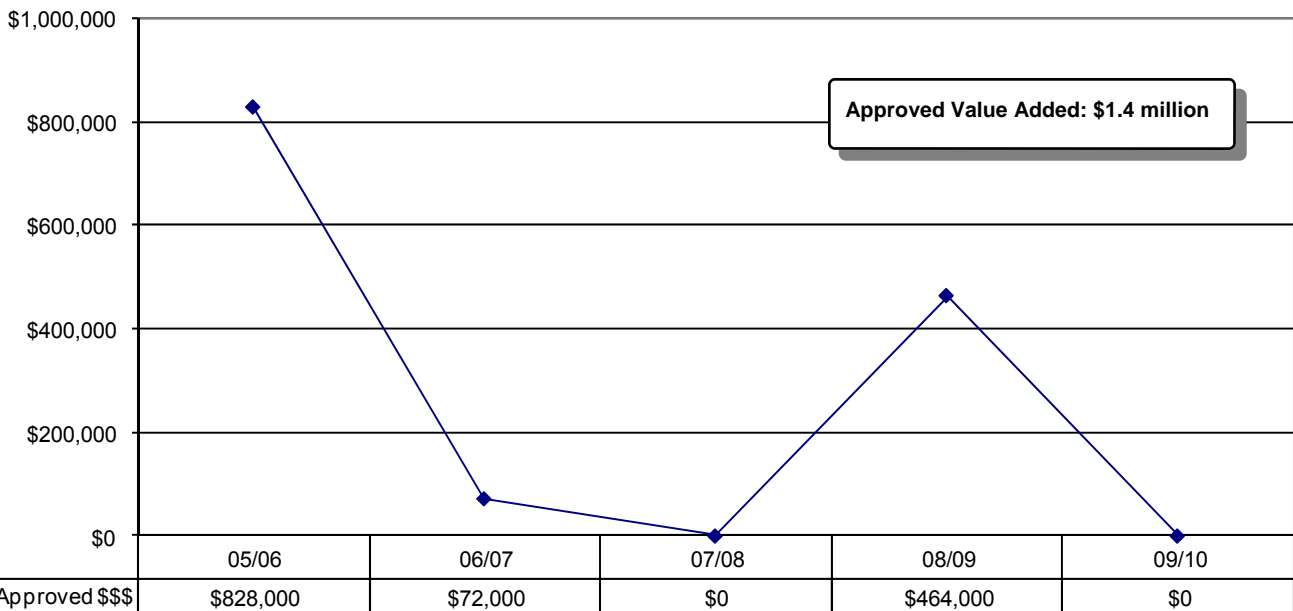


# District 5

**Q1: Annual Approved Cost Avoidance/Savings**  
District 5

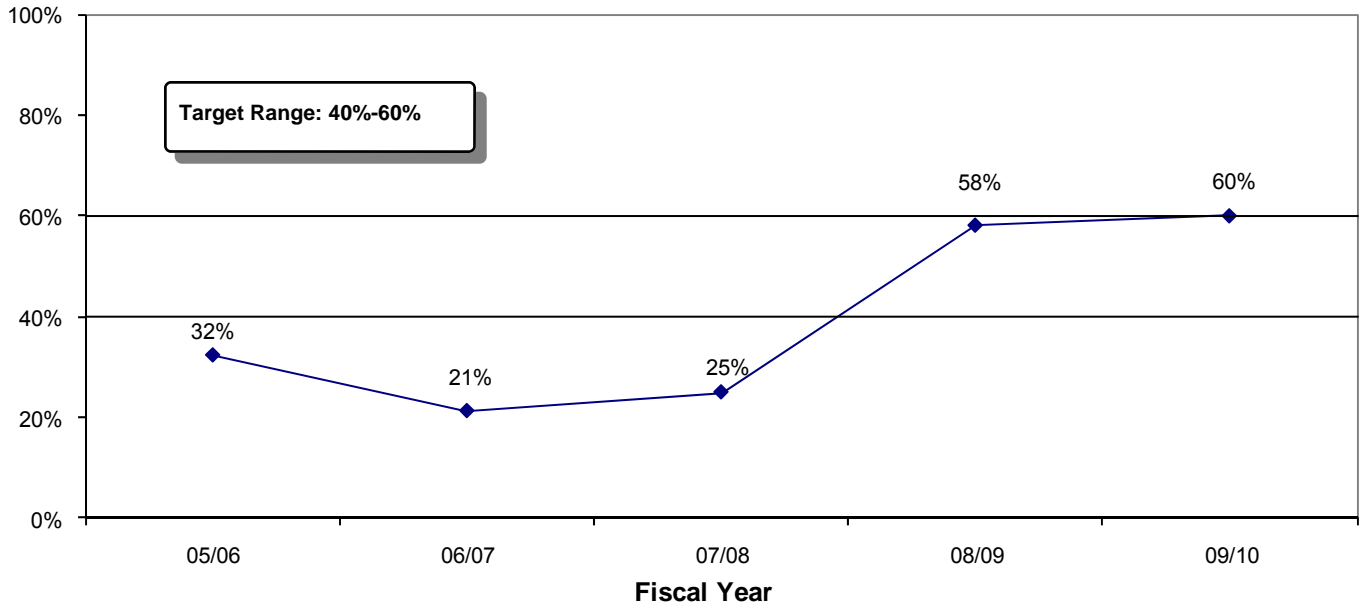


**Q2: Annual Approved Value Added Recommendations**  
District 5

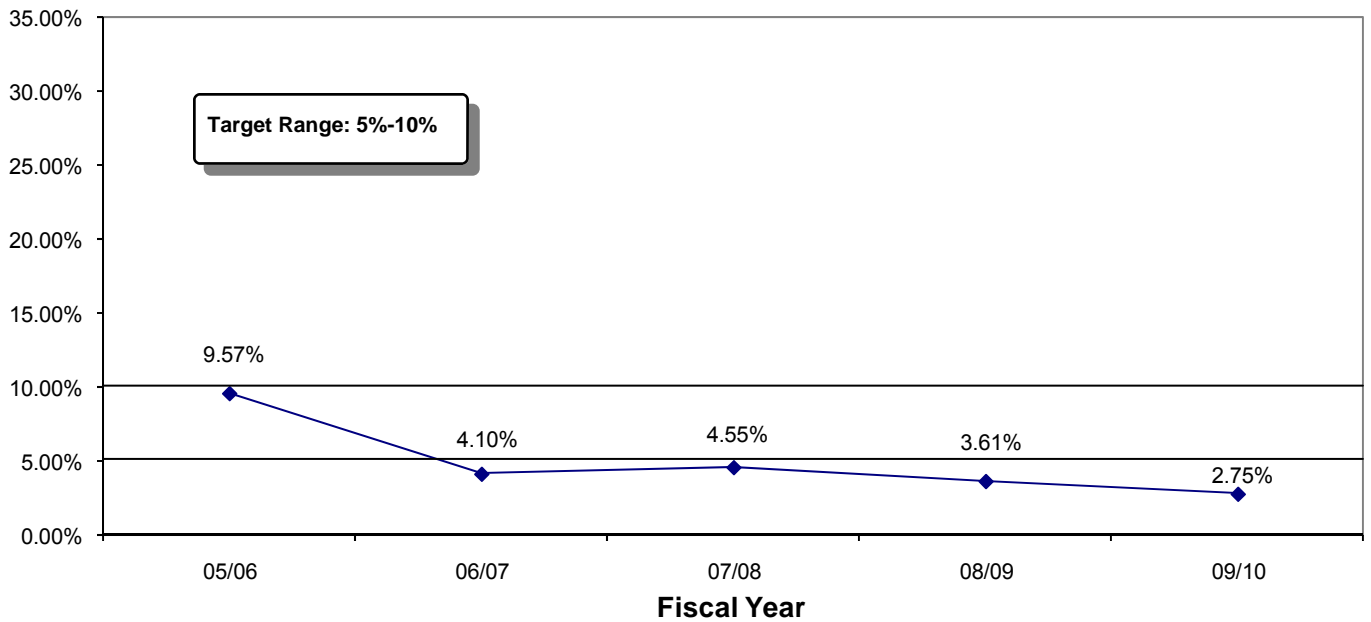


# District 5

### Q3: Annual Adoption Rate District 5

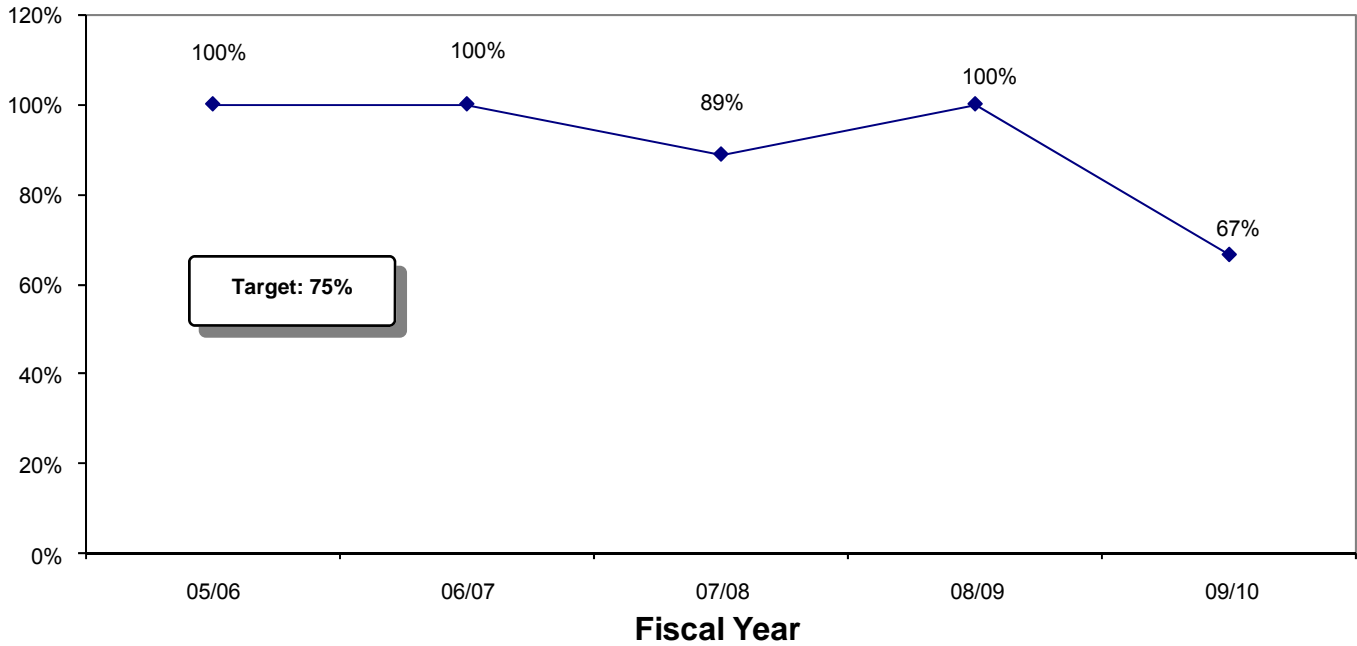


### Q4: Annual Percent Project Saved District 5

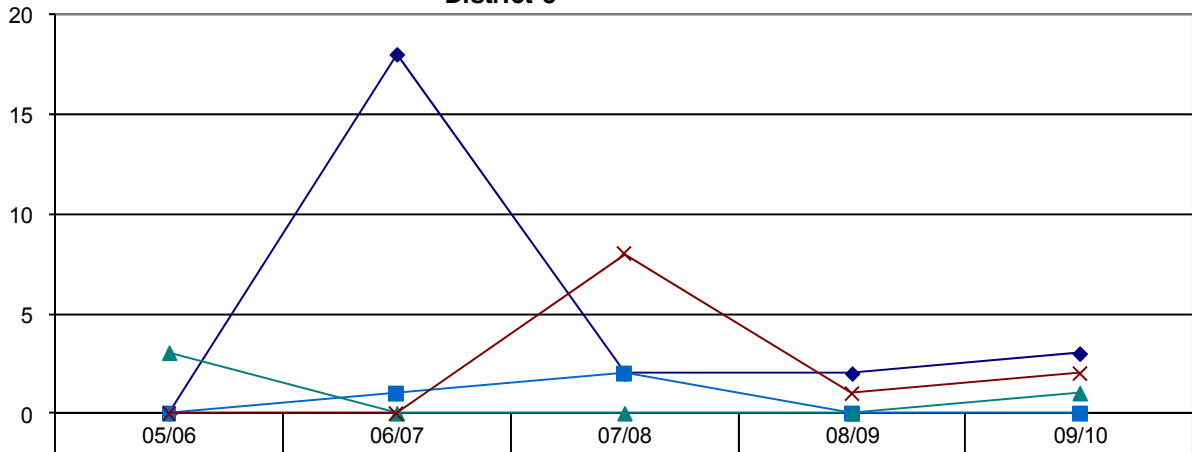


# District 5

**P1: % Scheduled VE Studies Completed**  
District 5



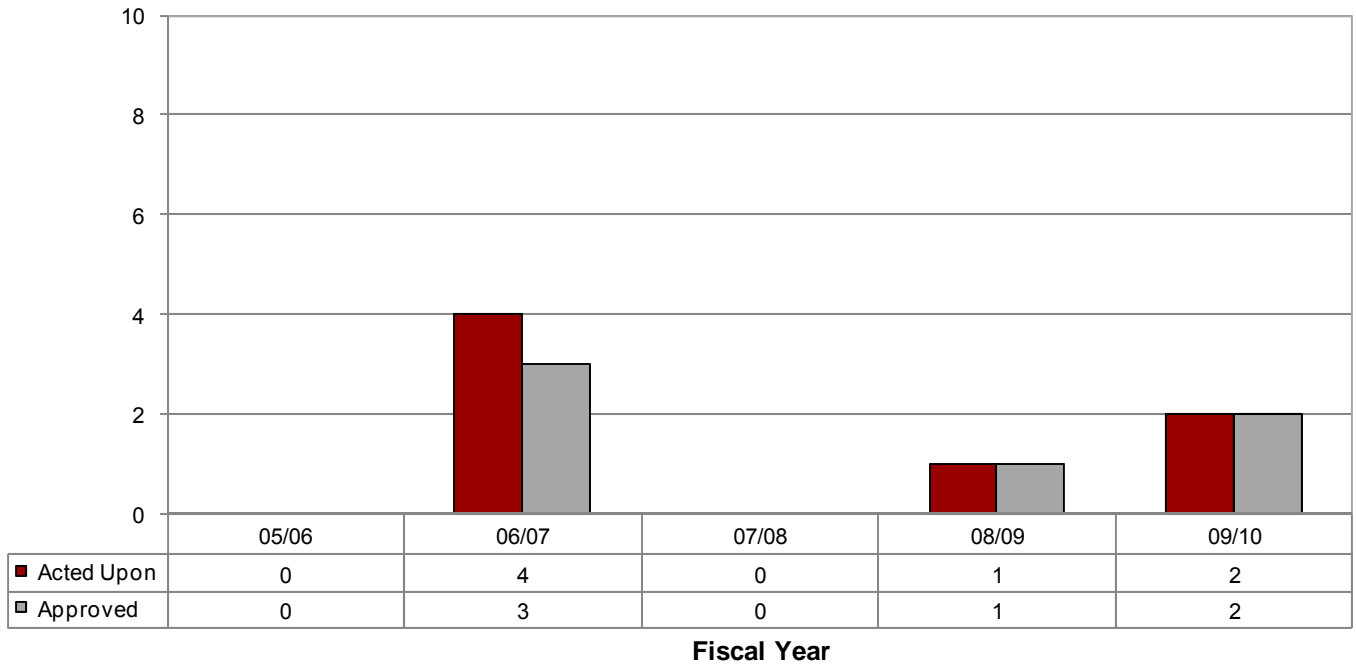
**P4: Annual # Pending Recommendations**  
District 5



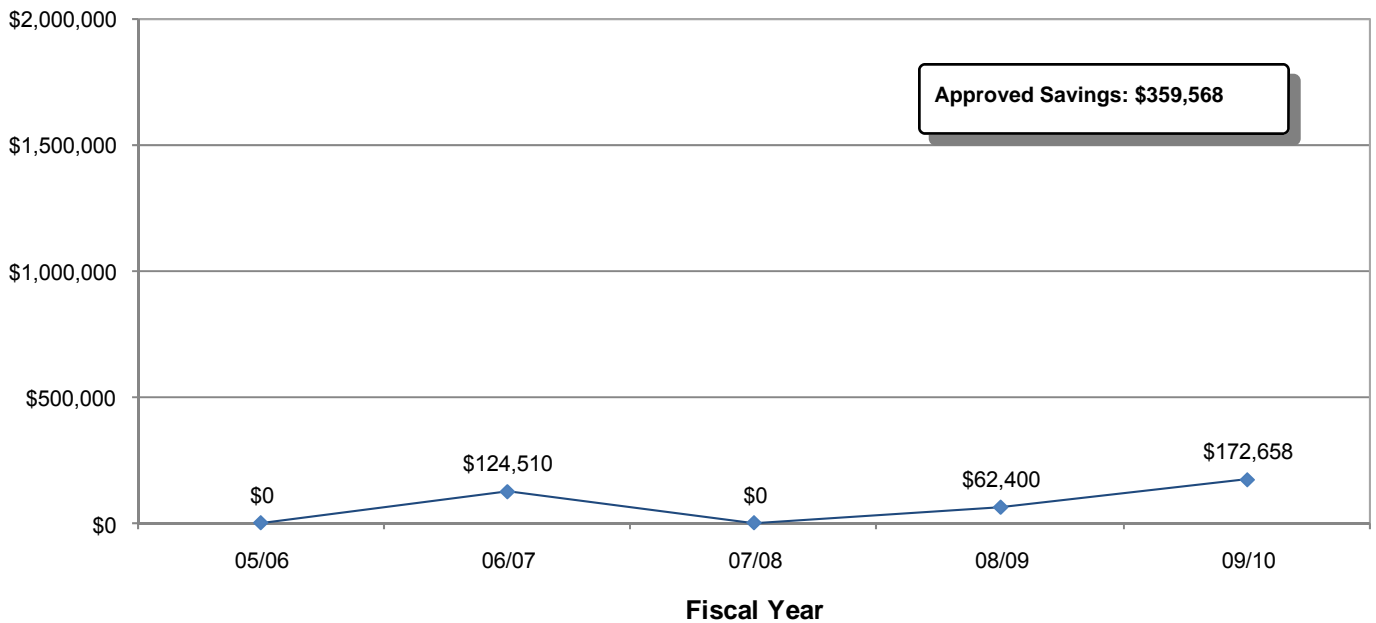
◆ 0 - 3 Months	0	18	2	2	3
■ 4 - 6 Months	0	1	2	0	0
▲ 7 - 12 Months	3	0	0	0	1
× > 12 Months	0	0	8	1	2

# District 5

**Q1: Annual VECP's Acted Upon**

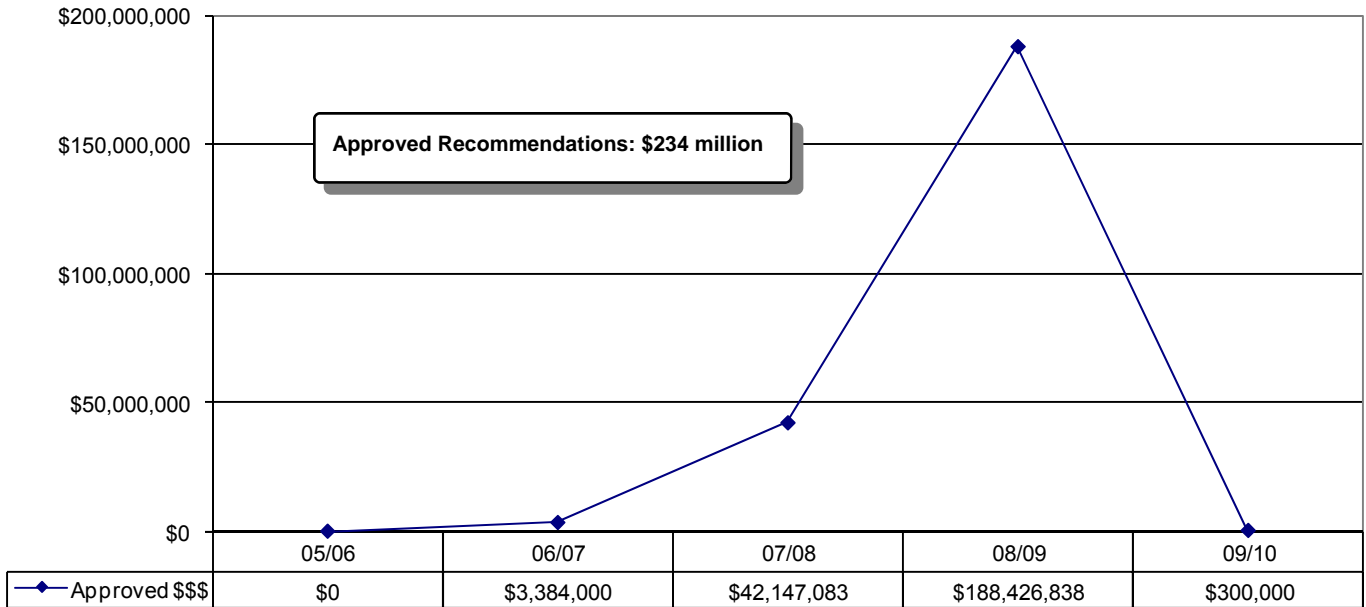


**Q1: Annual VECP's Acted Upon**

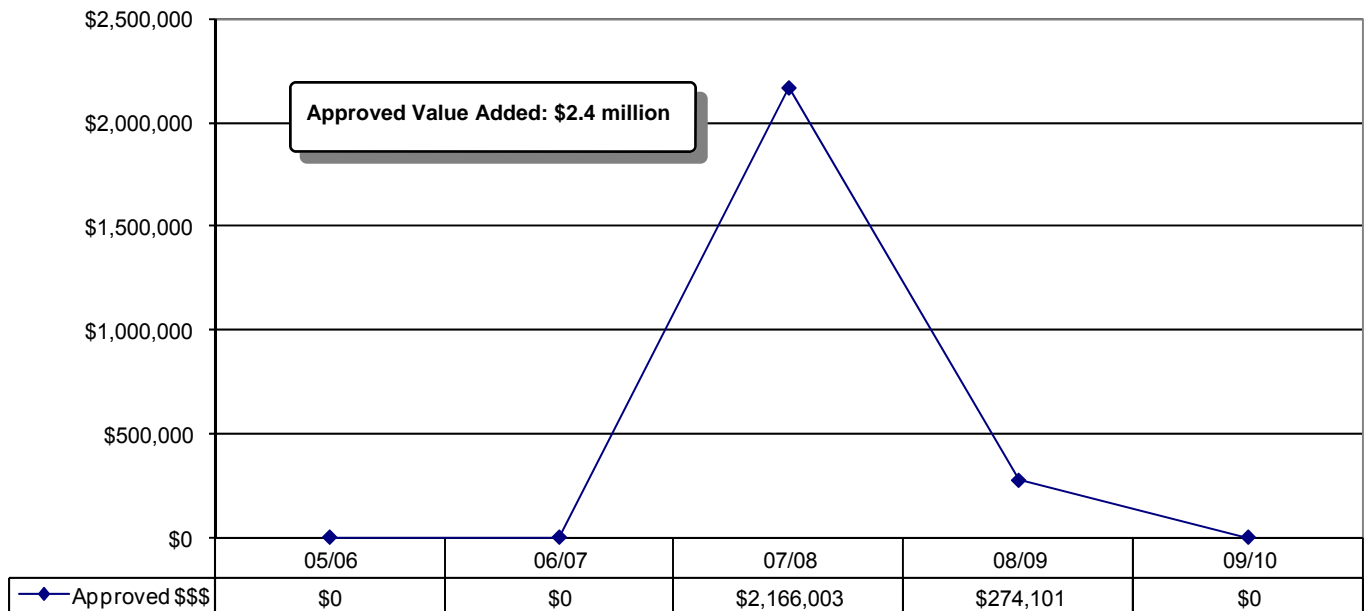


# District 6

**Q1: Annual Approved Cost Avoidance/Savings  
District 6**

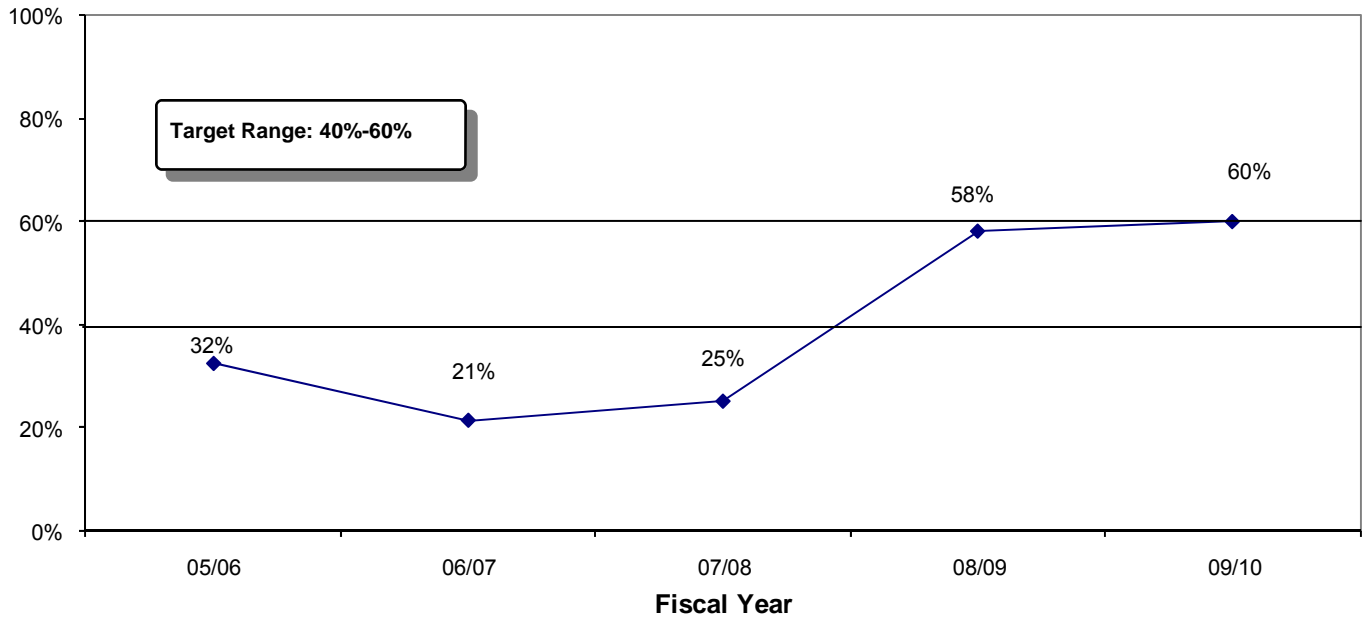


**Q2: Annual Approved Value Added Recommendations  
District 6**

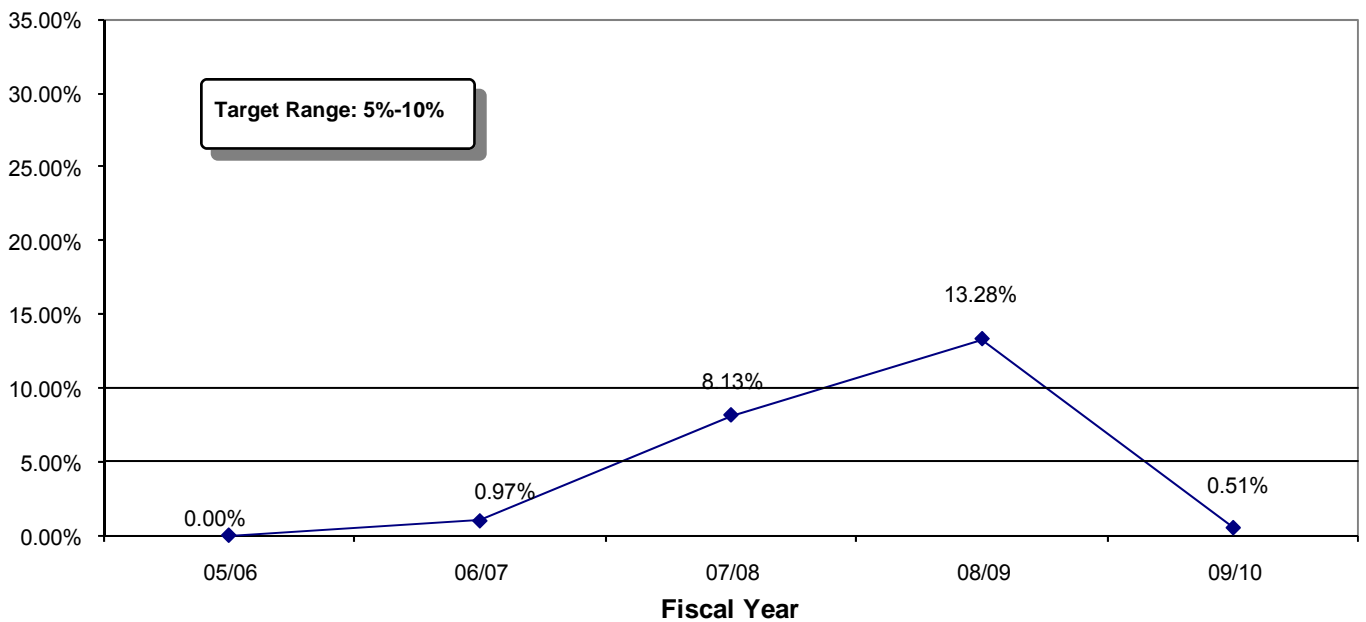


# District 6

### Q3: Annual Adoption Rate District 6



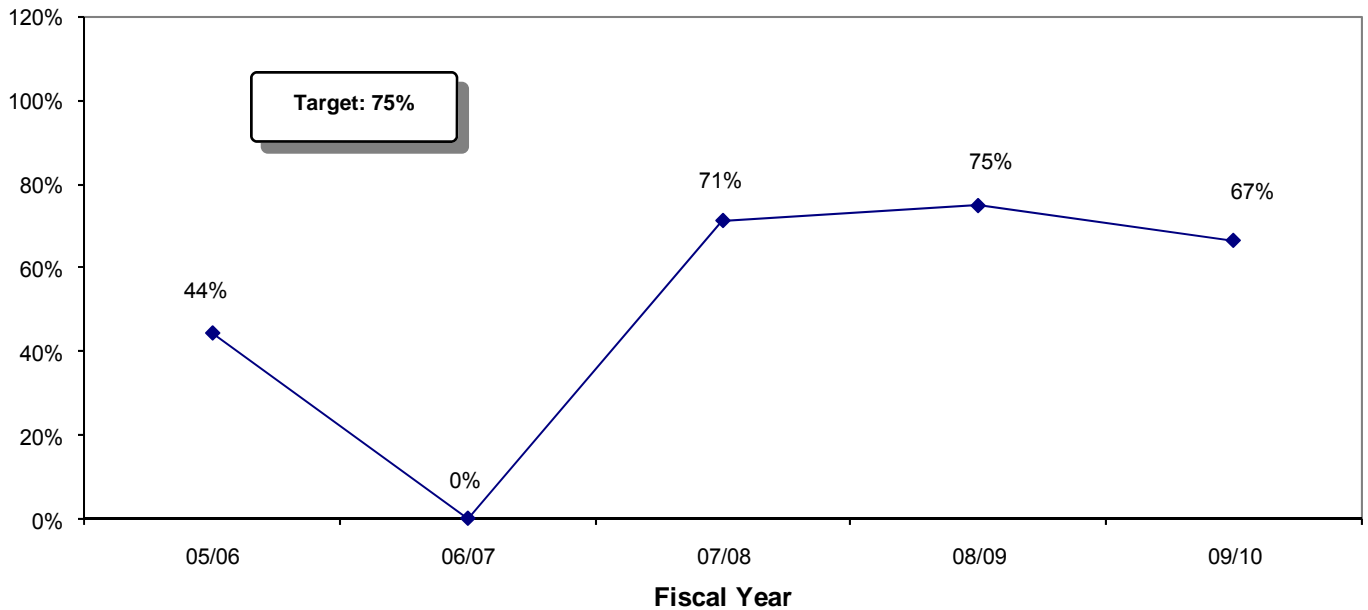
### Q4: Annual Percent Project Saved District 6



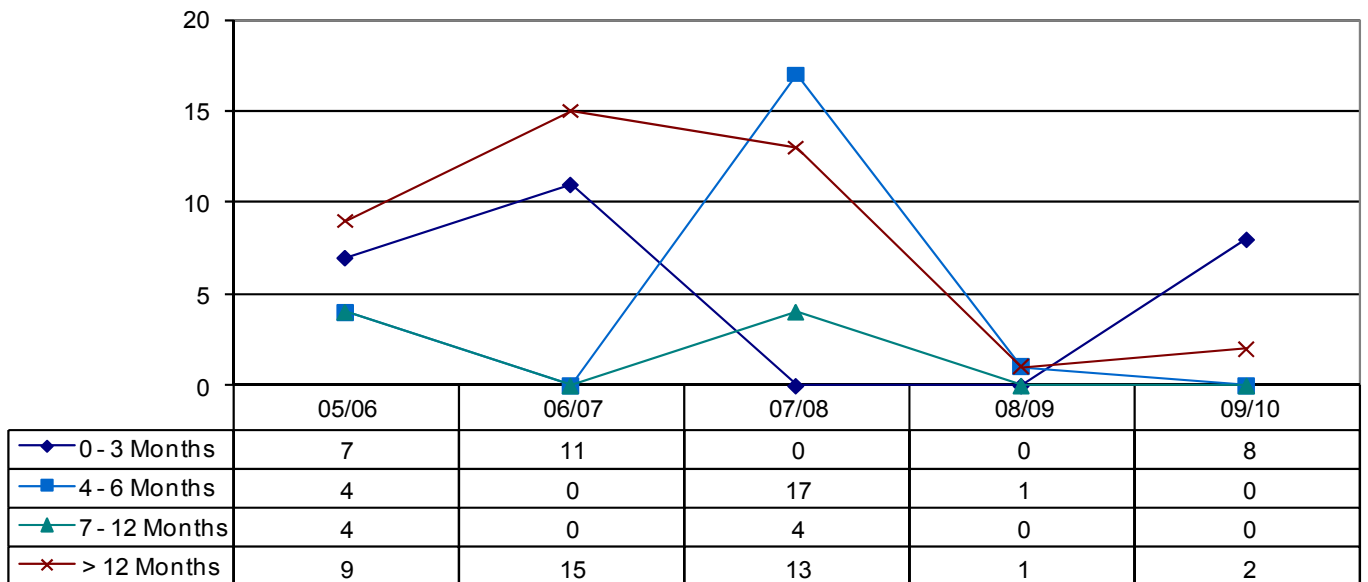


# District 6

**P1: % Scheduled VE Studies Completed**  
District 6

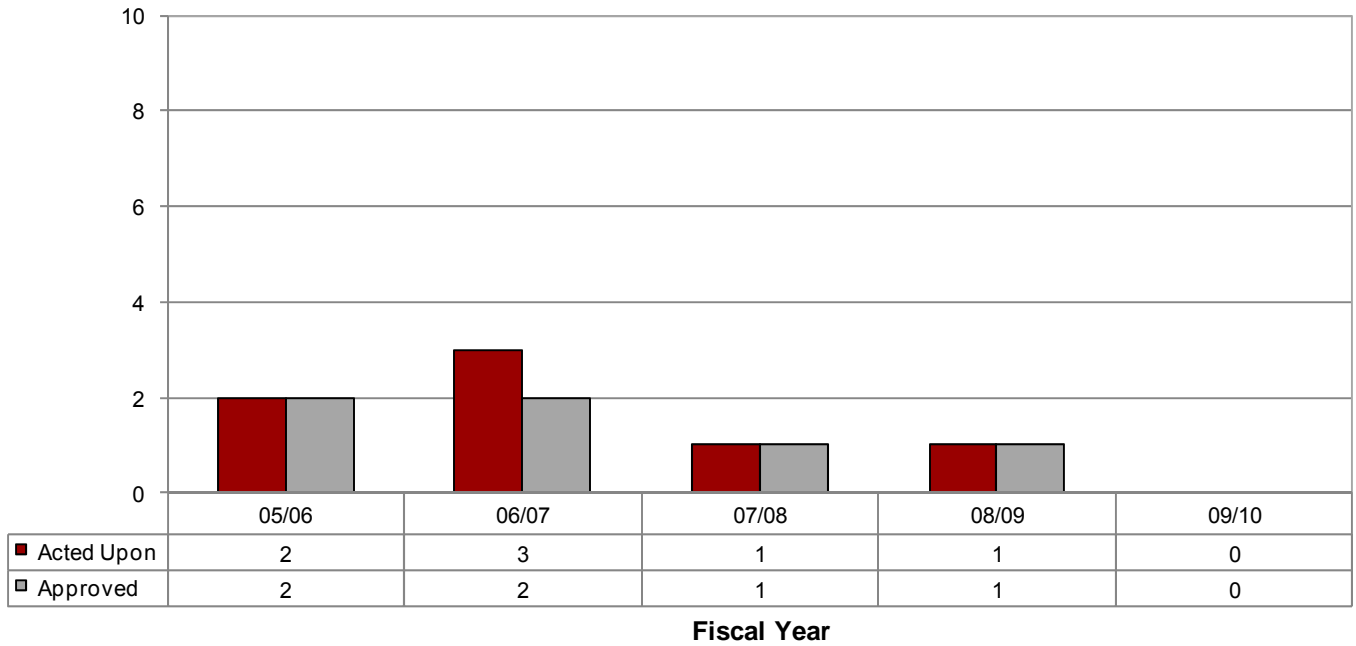


**P4: Annual # Pending Recommendations**  
District 6

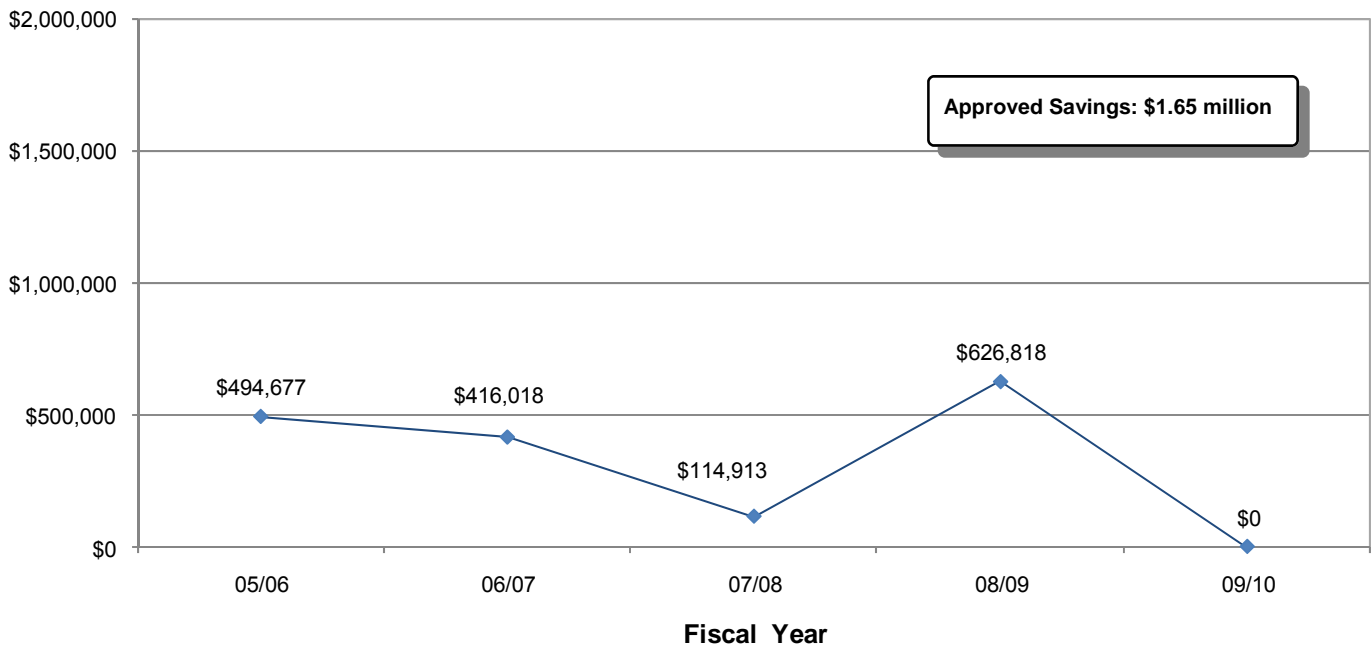


# District 6

## Q1: Annual VECP's Acted Upon

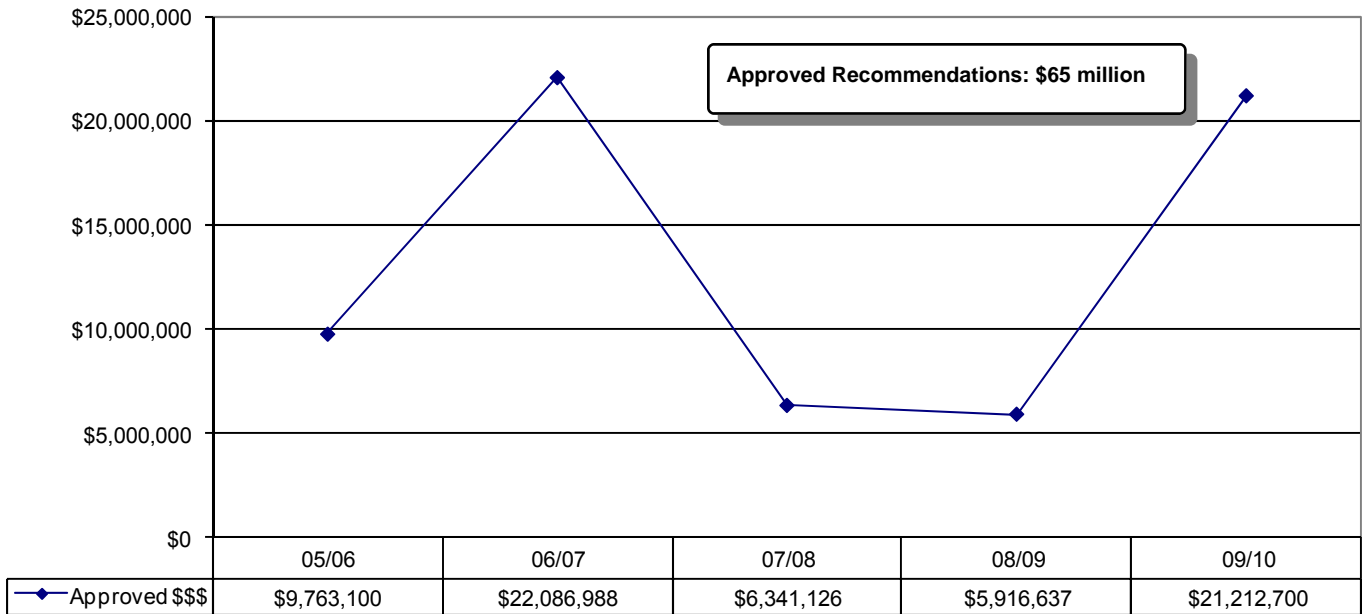


## Q2: Annual Approved VECP Savings

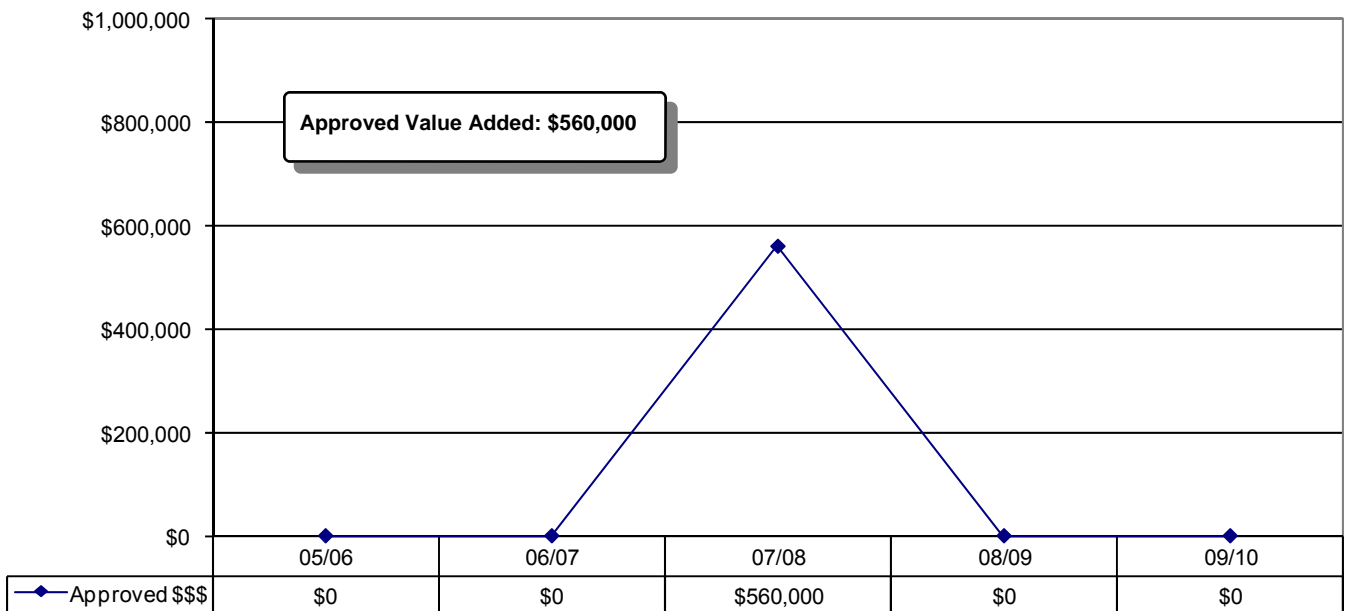


# District 7

**Q1: Annual Approved Cost Avoidance/Savings  
District 7**

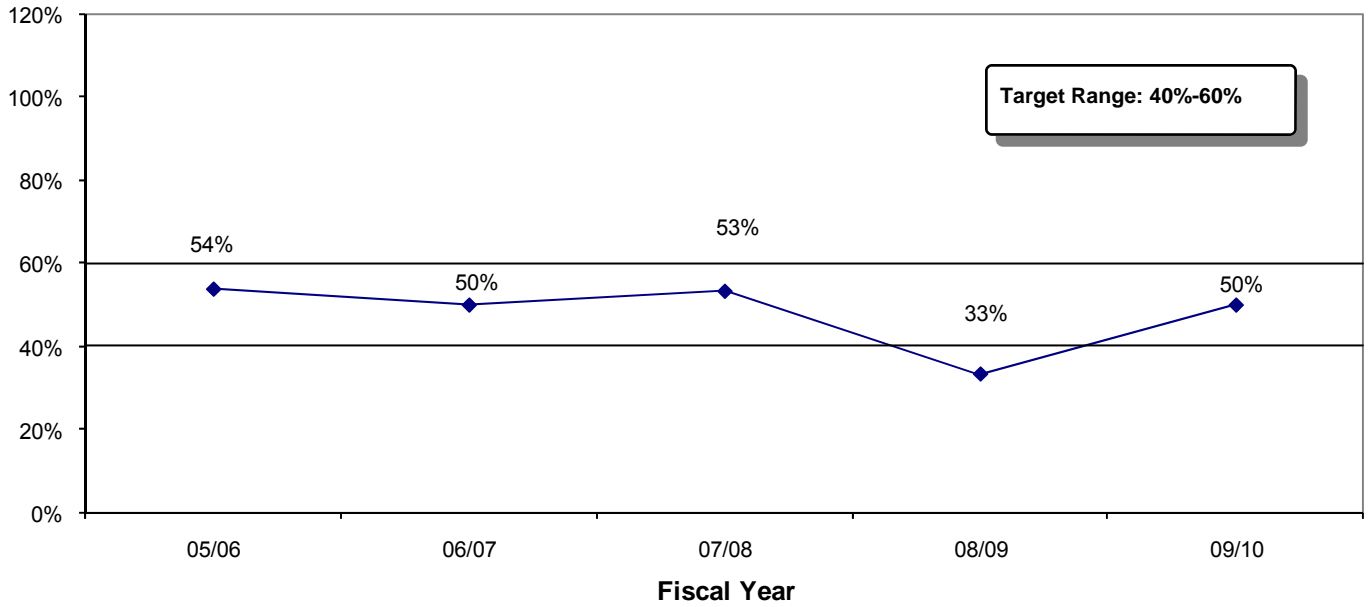


**Q2: Annual Approved Value Added Recommendations  
District 7**

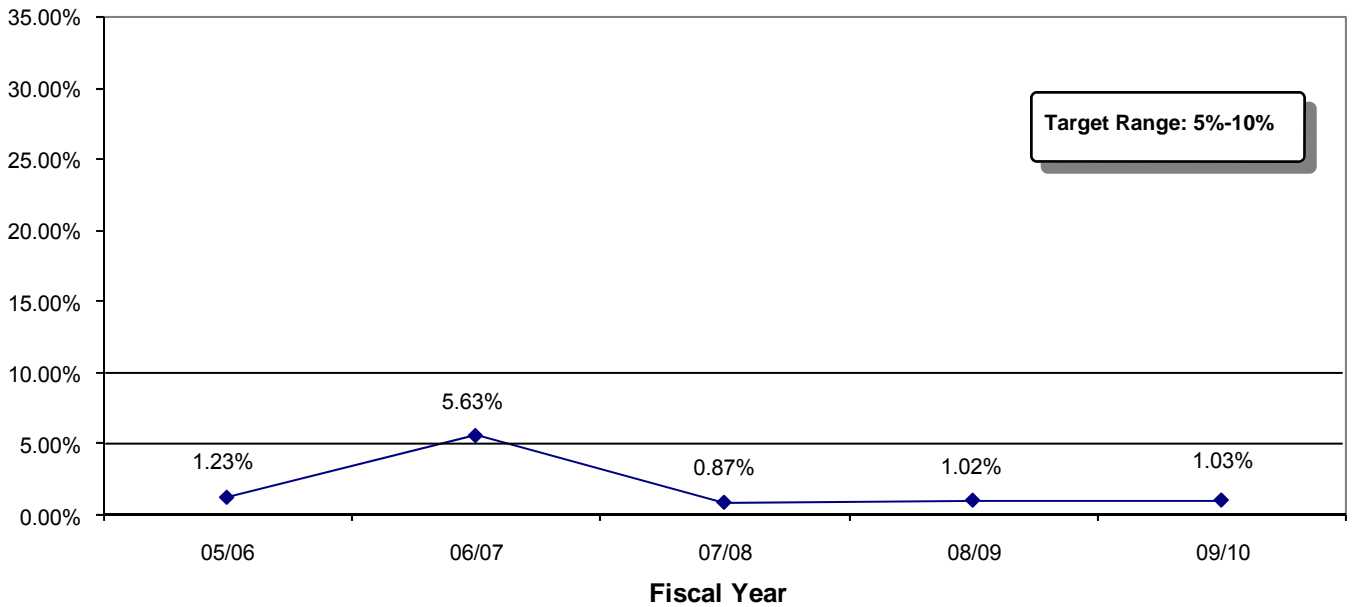


# District 7

### P1: %Scheduled VE Studies Completed District 7

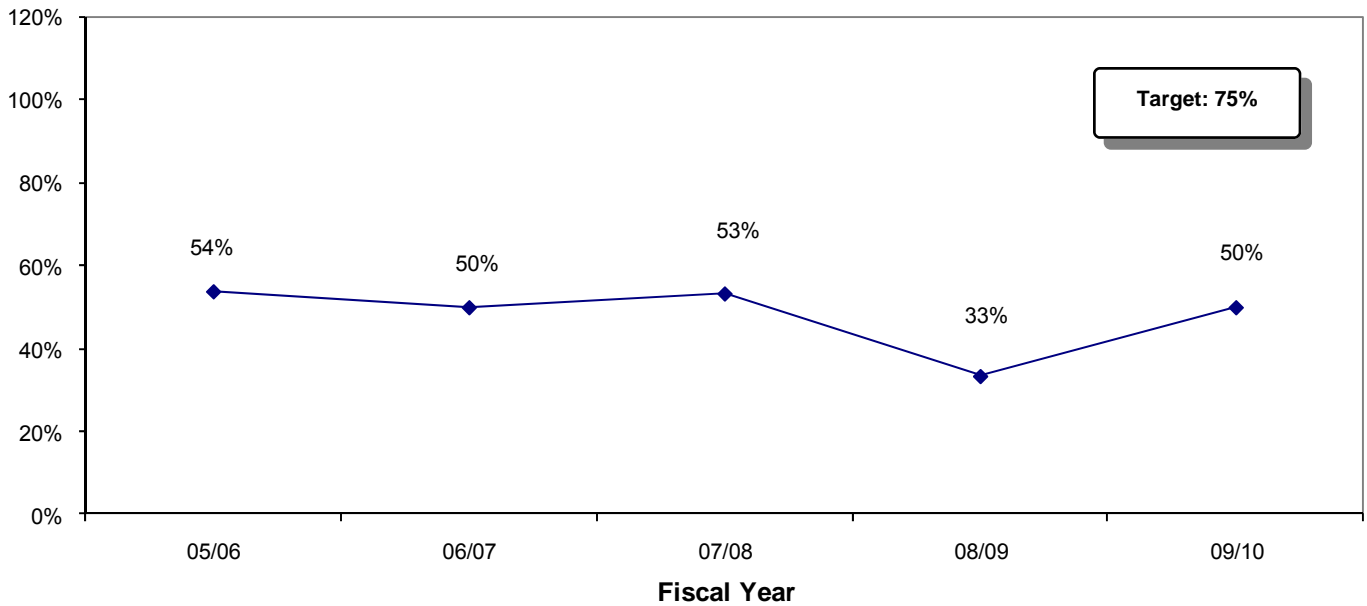


### Q4: Annual Percent Project Saved District 7

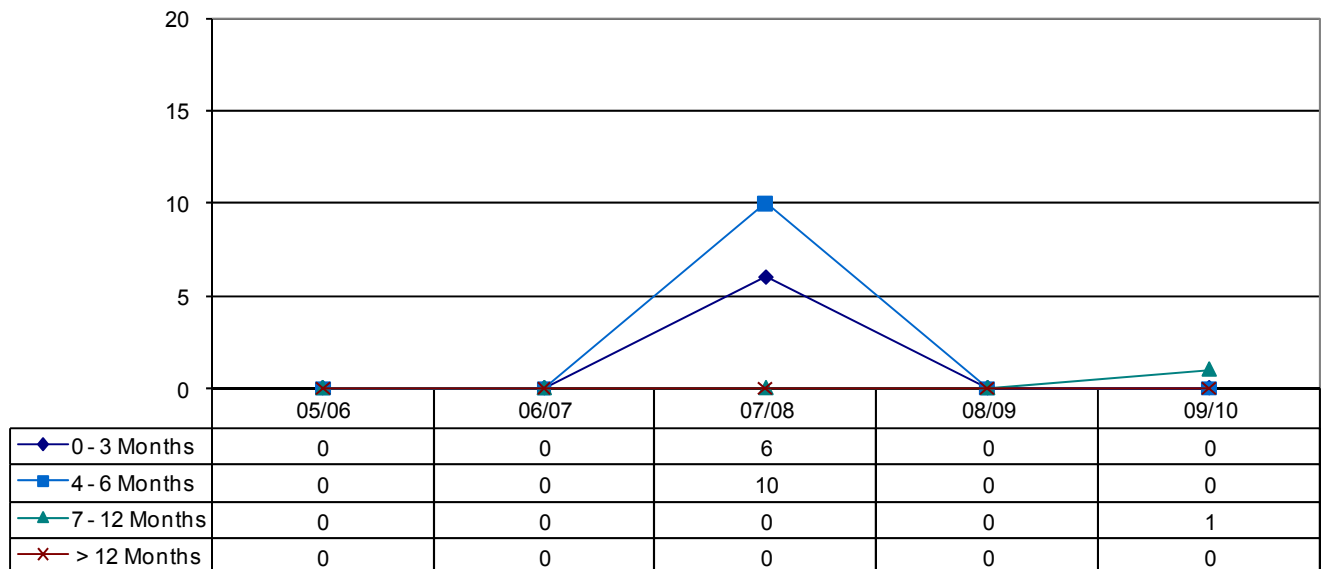


# District 7

**P1: %Scheduled VE Studies Completed**  
District 7

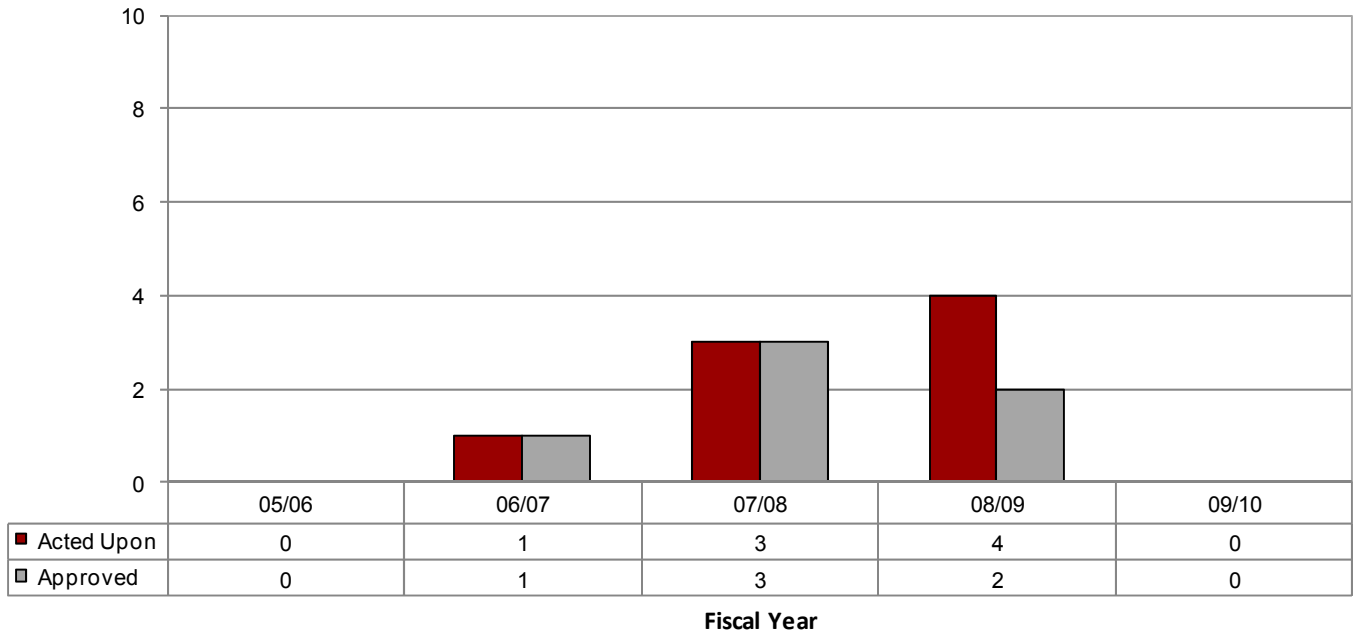


**P4: Annual # Pending Recommendations**  
District 7

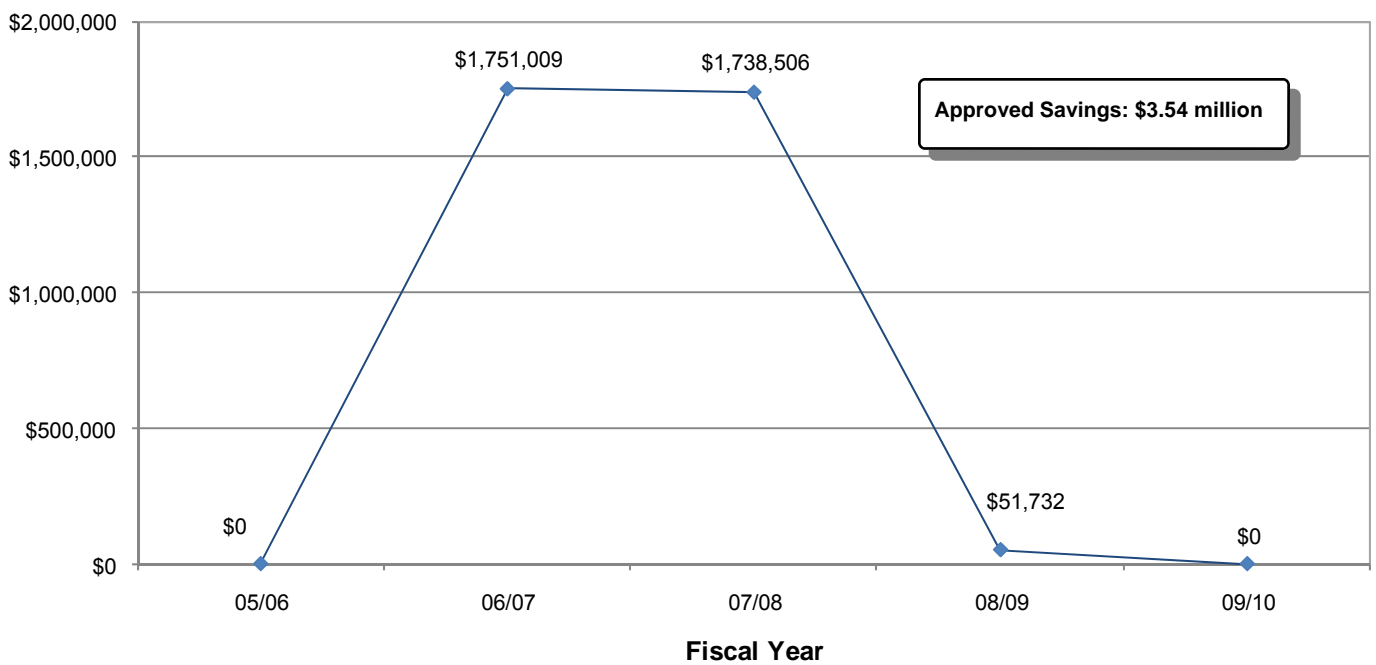


# District 7

**Q1: Annual VECP's Acted Upon**

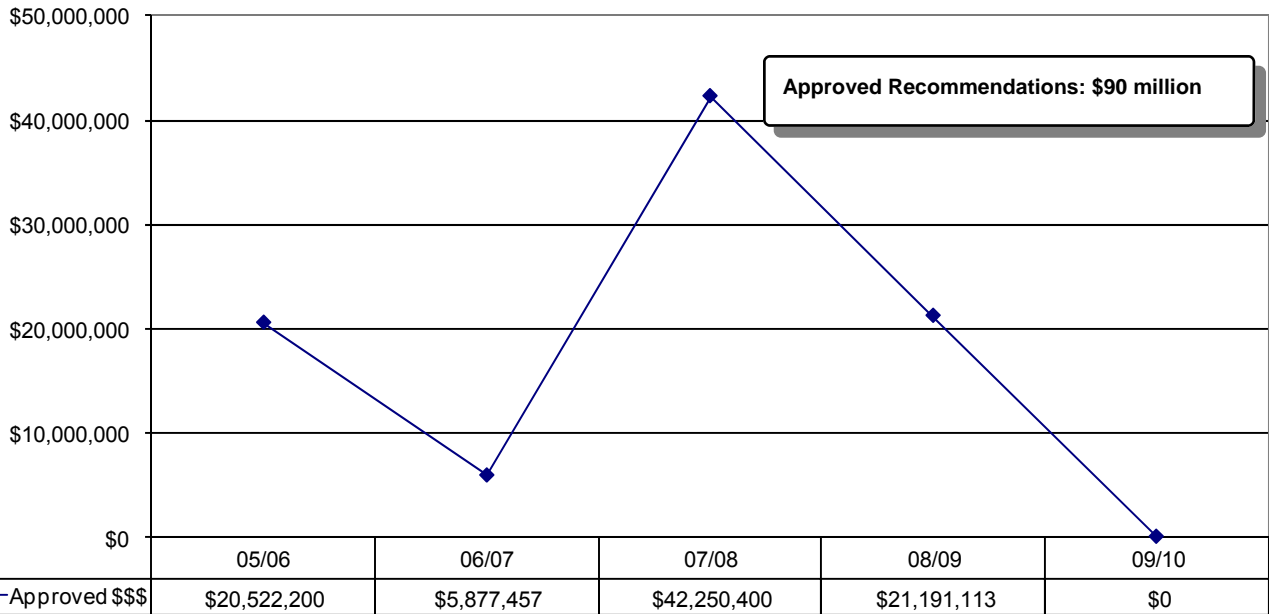


**Q1: Annual VECP's Acted Upon**

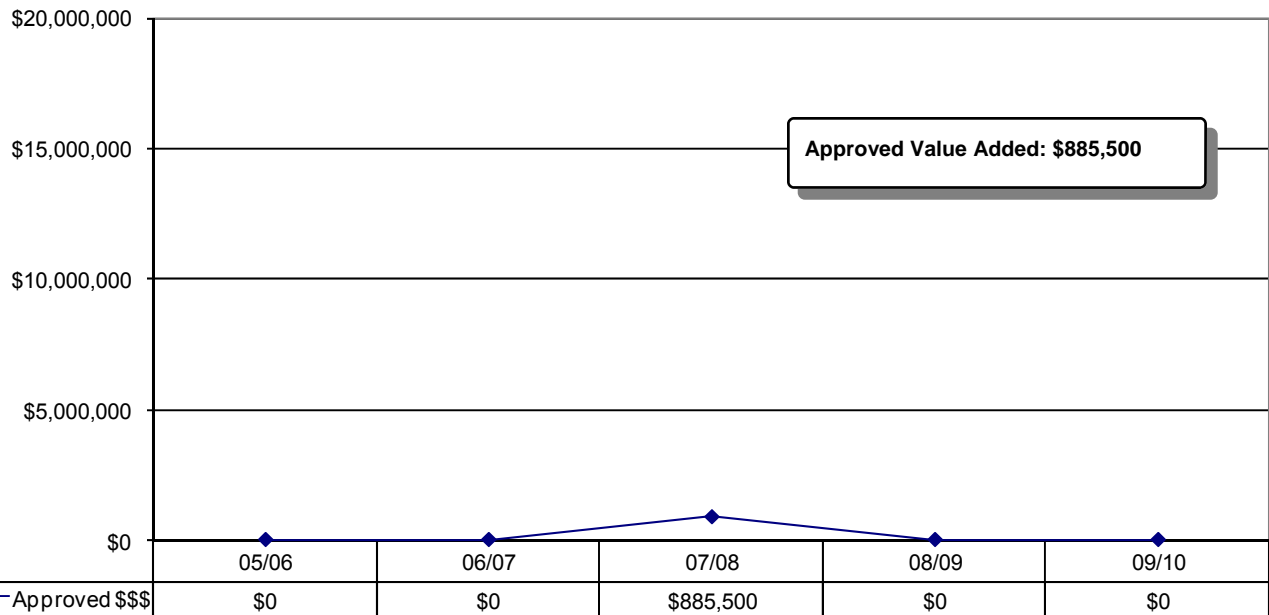


# Turnpike Enterprise

**Q1: Annual Approved Cost Avoidance/Savings**  
Turnpike Enterprise

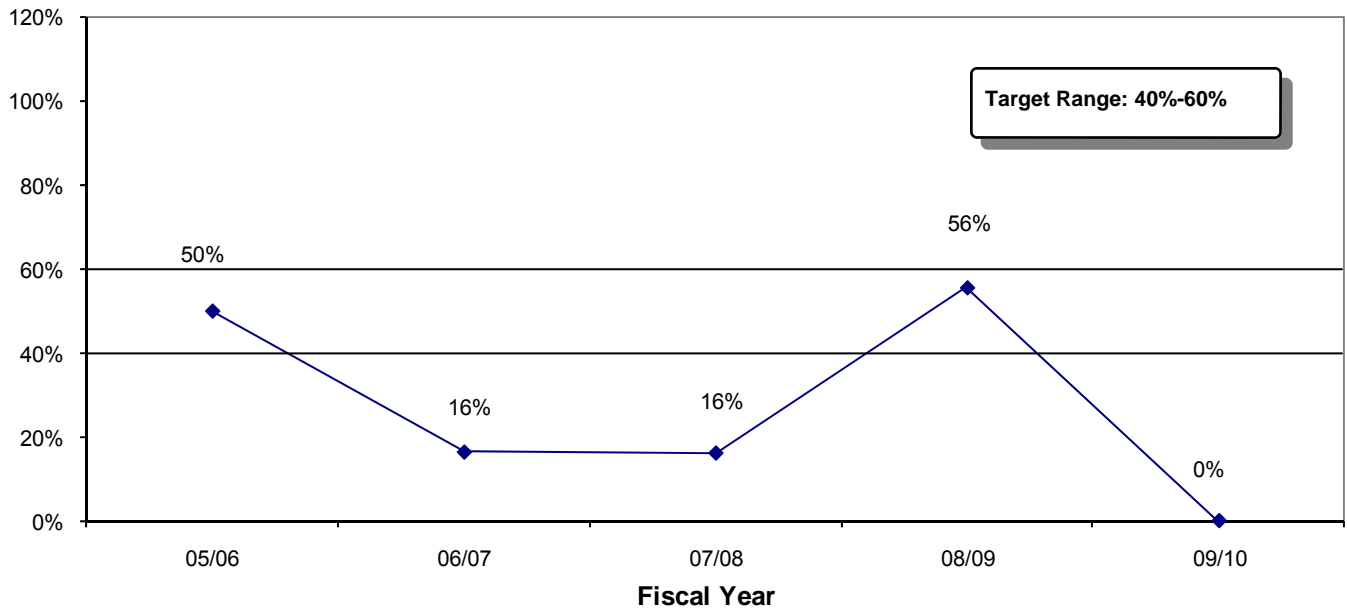


**Q2: Annual Approved Value Added Recommendations**  
Turnpike Enterprise

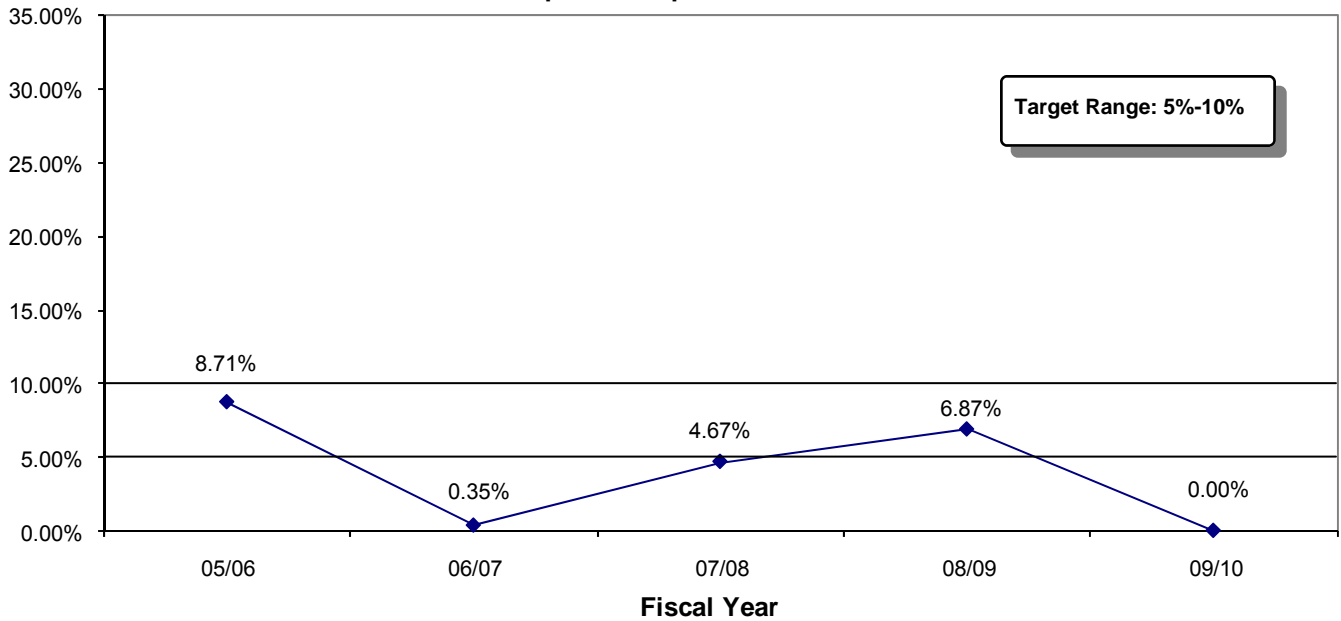


# Turnpike

**Q3: Annual Adoption Rate**  
Turnpike Enterprise



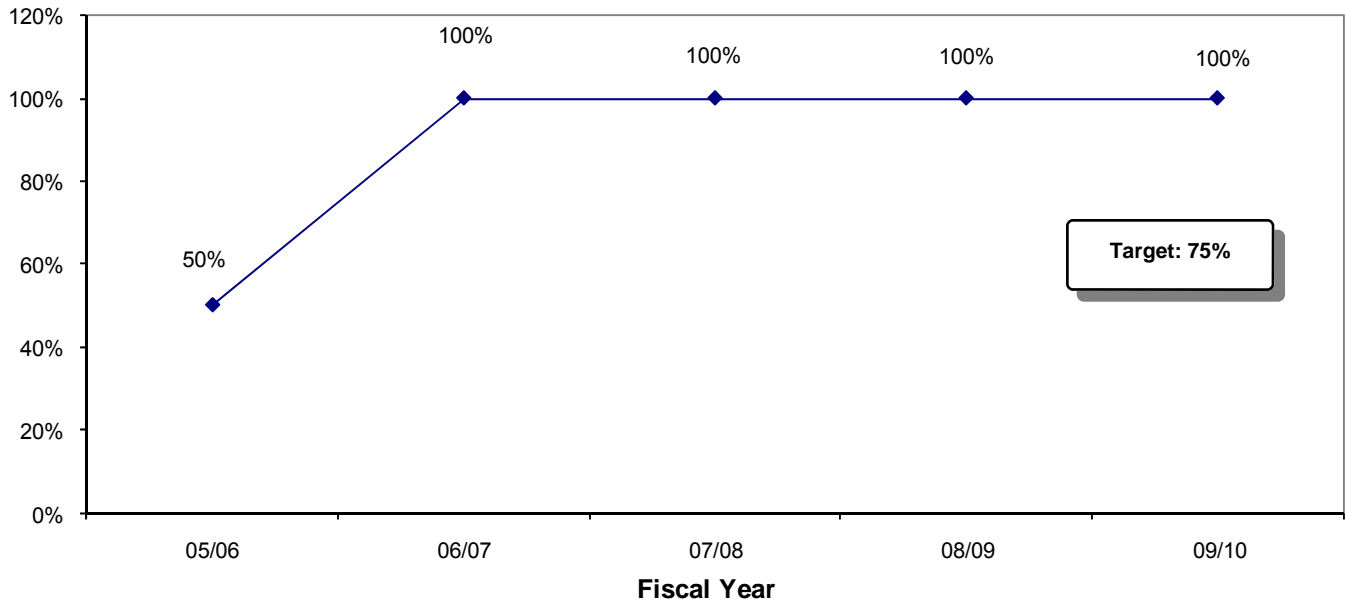
**Q4: Annual Percent Project Saved**  
Turnpike Enterprise



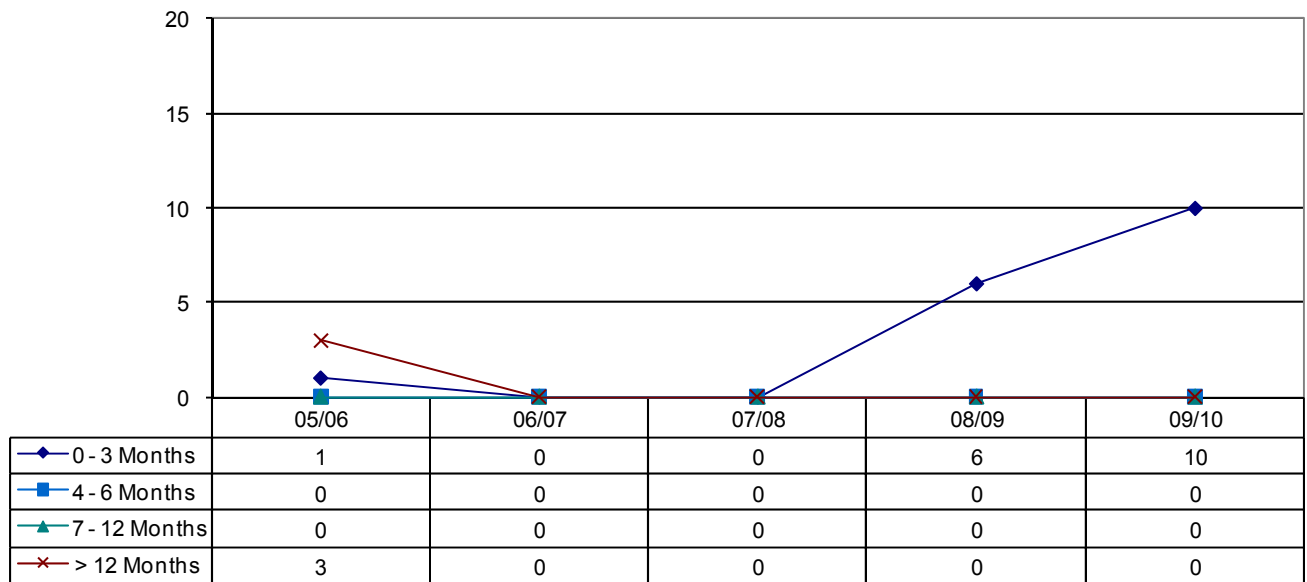


# Turnpike

**P1: % Scheduled VE Studies Completed**  
Turnpike Enterprise

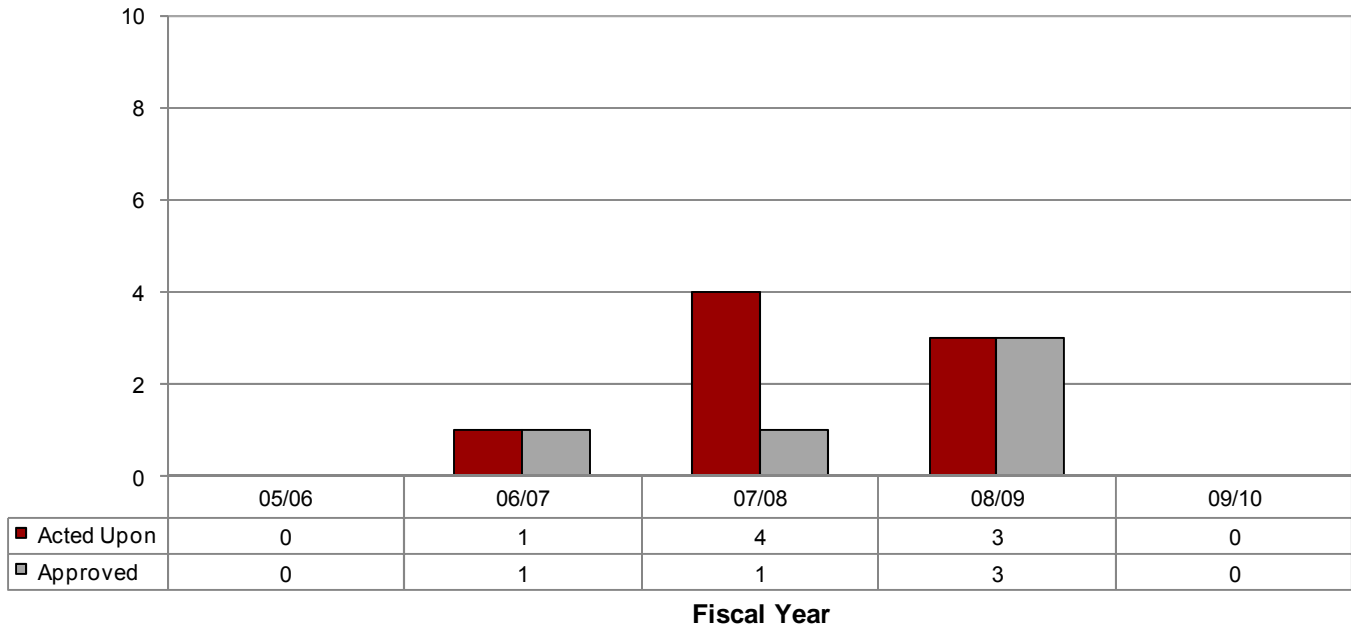


**P4: Annual # Pending Recommendations**  
Turnpike Enterprise

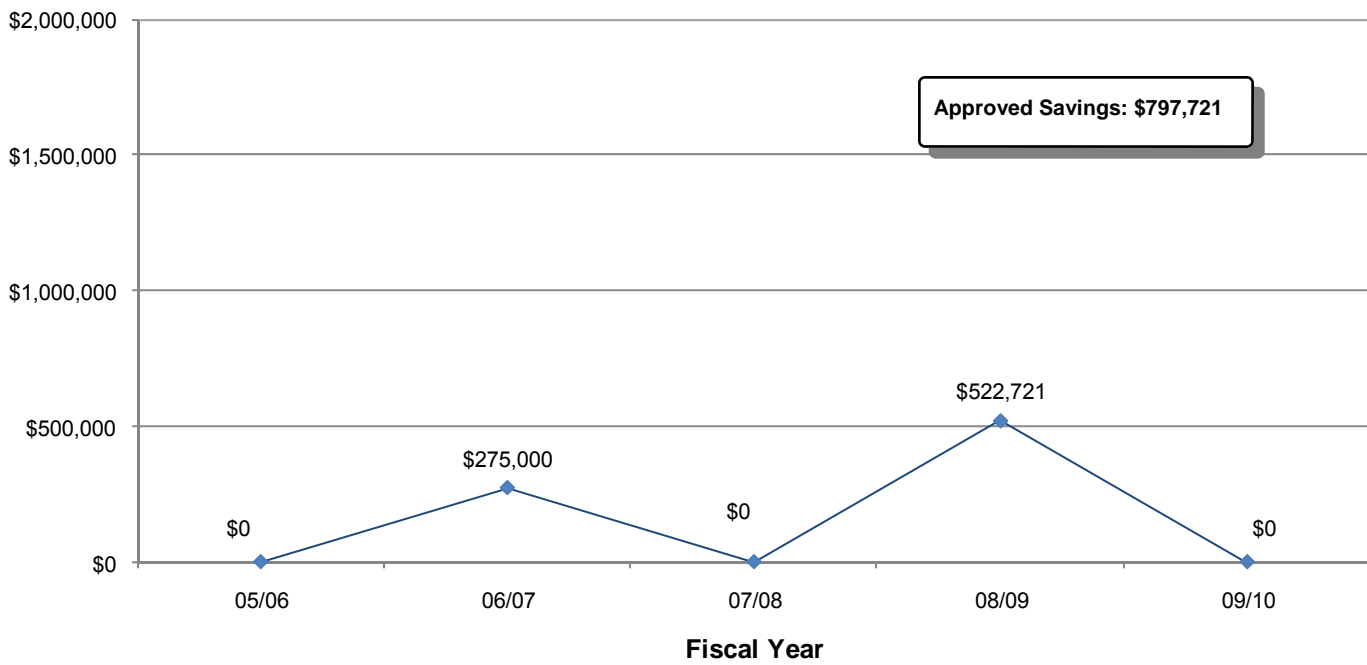


# Turnpike

**Q1: Annual VECP's Acted Upon**



**Q2: Annual Approved VECP Savings**



# Appendix B

## Process Control Systems

# Process Control System

Process Name: Value Engineering Program	Product/Service: Perform Value Engineering analysis on selected projects and document findings	Primary Customers: Management Regulators: FHWA	Customer's Valid Requirement(s): Effective use of resources to produce a quality transportation system.	Regulator's Valid Requirement(s): Projects with total costs of \$25 million or more have a VE study performed during the design process.
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Step / Time	Dept / Person	Flow Chart			Process and Quality Measures (QA/QC)		Checking / Measurement Monitoring			Miscellaneous Information	
		DISTRICT VALUE ENGINEER	VALUE ENGINEERING TEAM	STATE VALUE ENGINEER	Process Measures	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
PROJECT SELECTION		<pre> graph TD     A([Project Selection Process]) --&gt; B[Team Selection Process]     B --&gt; C[Conduct Value Engineering Study]     C --&gt; D[Recommendation Resolution Process]     D --&gt; E([Reporting/Tracking Process])     B -- P1, P2, P3 --&gt; A     D -- P4 --&gt; B                     </pre>			P1 % scheduled studies completed P2 # projects > \$25 million never studied P3 % projects studied in PD&E P4 # of pending rec. per time perio	75% 0 75% VER	VER & Work Plan Work Program VER VER	Quarterly Annual Quarterly Quarterly	SVE SVE SVE SVE	D1: 11/2006 C D2: 12/2006 C D3: 12/2006 C D4: 5/2007 C D5: 1/2007 C D6: 5/2007 C D7: 11/2006 C TPK: 1/2007 C	Federal Regulation 23 CFR 627 VE Procedure 625-030-002 1999 AASHTO Guidelines for VE NCHRP Synthesis 352 - Value Engineering Applications in Transportation
TEAM SELECTION											
STUDY											
RESOLUTION											
REPORTING											
				Q1 \$\$\$ Saved per time period Q2 Value Added \$\$\$ over time period Q3 Adoption Rate Q4 Percent Saved Q5 Retun on Investment Q6 % Customer Satisfaction	40%-60% 5% - 10% \$130 to \$1	VER VER VER VER Surveys	Quarterly Quarterly Quarterly Quarterly Annual Annual	SVE SVE SVE SVE SVE DVE			

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Approved: \_\_\_\_\_ Date: \_\_\_\_\_ Process Owner: State Value Engineer Rev #: 1.5 Rev Date: 10/2007

CODES:  
C- Compliance  
NC - Noncompliant  
BP Best Practice

# Process Control System

<b>Process Name:</b> Value Engineering Project Selection	<b>Product/Service:</b> Develop a Value Engineering Work Plan by July 1 of each fiscal year.	<b>Primary Customers:</b> District Management, State Value Engineer. <b>Partners:</b> FHWA	<b>Valid Requirement(s):</b> All projects with the most potential for improvement have a VE Analysis.	<b>Regulator's Valid Requirement(s):</b> All projects on the NHS system with estimated total costs > \$25 million have a VE analysis
--	--	---	---	--

	Input(s): Projects Supplier(s): Work Program	Flow Chart			Process and Quality Indicators		Checking / Indicator Monitoring			Miscellaneous Information
Dept / Person Step / Time	DISTRICT VALUE ENGINEER	DISTRICT MANAGEMENT	STATE VALUE ENGINEER	Process Indicators	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
				Quality Indicators	And Specs / Targets	What is to be checked?	When to check?	Who will check?	Date of Last Review	
NEED				P1	100%	Work Plan Received	Annual	SVE	D1: 11/2006 C	Federal Regulation 23 CFR 627  VE Procedure 625-030-002  AASHTO Guidelines for VE  NCHRP Synthesis 352-Value Engineering Applications in Transportation
REVIEW				Q1	75%	VER & Work Plan	Quarterly	SVE	D2: 12/2006 C	
				Q2	0	Work Program	Annual	SVE	D3: 12/2006 C	
				Q3	60%	VER	Quarterly	SVE	D4: 5/2007 C	
DEVELOP				D5: 1/2007 C						
APPROVAL				D6: 5/2007 C						
DISTRIBUTE	D7: 11/2006 C	TPK: 1/2007 C								
EXECUTE	CODES: C- Compliance NC- Noncompliant BP Best Practice									

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**Approved:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Process Owner:** District Value Engineer **Rev #:** 1.5 **Rev Date:** 8/2007

# Process Control System

**Process Name:** Value Engineering Team Selection    
**Product/Service:** Team with the necessary skills and experience to conduct a value engineering analysis    
**Primary Customers:** Team Leaders & Team Members    
**Valid Requirement(s):** Team makeup has the required disciplines, leadership skills and VE experience to study the selected project.    
**Regulator's Valid Requirement(s):** Mult-disciplined team of individuals not personally involved in the design of the project

Input(s): Project disciplines Supplier(s): Department Heads, Consultants		<b>Flow Chart</b>			Process and Quality Indicators		Checking / Indicator Monitoring			Miscellaneous Information
Dept / Person	DISTRICT VALUE ENGINEER	DEPARTMENT HEAD	STATE VALUE ENGINEER	Process Indicators	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
Step / Time				Quality Indicators	And Specs / Targets	What is to be checked?	When to check?	Who will check?	Date of Last Review	
NEED				Q1	0	VER & VE Study Report	Annual	SVE	D1: 11/2006 C	Federal Regulation 23 CFR 627
CONSULTANT REQUESTS				Q2	0	VER & VE Study Report	Annual	SVE	D2: 12/2006 C	VE Procedure 625-030-002 AASHTO Guidelines for VE
TEAM SELECTION				Q3	0	VER, VE study report, SAVE, FLPE, TRESS	Annual	SVE	D3: 12/2006 C	NCHRP Synthesis 352 - Value Engineering Applications in Transportation
NOTIFICATION									D4: 5/2007 C D5: 1/2007 C D6: 5/2007 C D7: 11/2006 C TPK: 1/2007 C	CODES: C- Compliance NC- Noncompliant BP Best Practice

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**Approved:** \_\_\_\_\_    
**Date:** \_\_\_\_\_    
**Process Owner:** District Value Engineer    
**Rev #:** 1.5    
**Rev Date:** 8/2007

# Process Control System

<b>Process Name:</b> Conduct Value Engineering Study	<b>Product/Service:</b> Completed VE Analysis with a report documenting the findings of the team.	<b>Primary Customers:</b> Management & DVE. <b>Partners:</b> FHWA, State Value Engineer	<b>Customer's Valid Requirement(s):</b> Follow the VE Job Plan to produce quality recommendations that can be implemented.	<b>Regulator's Valid Requirement(s):</b> Follow widely recognized systematic problem solving process that is used throughout private industry and government agencies.
--	---	--	--	--

Input(s): Project Information Supplier(s): Project Manager		Flow Chart				Process and Quality Indicators		Checking / Indicator Monitoring			Miscellaneous Information		
Step / Time	Dept / Person	DISTRICT VALUE ENGINEER	VALUE ENGINEERING TEAM				Process Indicators	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
							Quality Indicators	And Specs / Targets	What is to be checked?	When to check?	Who will check?	Date of Last Review	
NEED		Conduct VE Study					Q1 Adoption Rate	40%-60%	VER	Quarterly	SVE	D1: 11/2006 C	Federal Regulation 23 CFR 627
INVESTIGATION		Feedback	Investigation Phase - Gather information about the present design from engineering reports, design plans, estimates, alternatives, right of way maps etc. - Gather information about project from Project Manager, Designer and anyone else familiar with the project.									D2: 12/2006 C	VE Procedure 625-030-002
ANALYSIS			Analysis Phase: - Team identifies the elements with the greatest potential for value improvement.									D3: 12/2006 C	NCHRP Synthesis 352 - Value Engineering Applications in Transportation
SPECULATION			Speculation Phase: - Team generates alternatives to the proposed design by using brainstorming techniques									D4: 5/2007 C	
EVALUATION			Evaluation Phase: - Team evaluates the alternatives and determines which offer the greatest potential for savings and approval. Advantages and disadvantages are considered at this point.									D5: 1/2007 C	
DEVELOPMENT			Development Phase: - Team develops the alternatives selected. Sketches, cost estimates, validation of data and other technical work are done at this point.									D6: 5/2007 C	
PRESENTATION			Presentation Phase: - Team presents its recommendations to management and appropriate staff with time allocated for question and answer. - VE Study report is developed during the study as a step-by-step record.									D7: 11/2006 C	
RESULTS		Post Study Surveys of Team, Project Manager and Management. Feedback results to Project Selection and Team Selection Processes & Team Leader.										TPK: 1/2007 C	CODES:  C- Compliance NC- Noncompliant BP Best Practice
		Enter data into VE database											

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**Approved:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Process Owner:** District Value Engineer **Rev #:** 1.5 **Rev Date:** 8/2007

# Process Control System

<b>Process Name:</b> Value Engineering Recommendation Resolution Process.	<b>Product/Service:</b> Resolution of VE Team Recommendations	<b>Primary Customers:</b> Project Manager, SVE <b>Partners:</b> FHWA	<b>Customer's Valid Requirement(s):</b> Recommendations are acted upon in a timely manner, but that a recommendation is acted upon based on information and not time.	<b>Regulator's Valid Requirement(s):</b> Process to approve or reject recommendations to ensure the prompt review of VE recommendations
---	---	---	---	---

	Input(s): Recommendations Supplier(s): VE Team	Flow Chart		Process and Quality Indicators		Checking / Indicator Monitoring			Miscellaneous Information	
Dept / Person			STATE VALUE ENGINEER	Process Indicators	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
Step / Time	DISTRICT VALUE ENGINEER			Quality Indicators	And Specs / Targets	What is to be checked?	When to check?	Who will check?	Date of Last Review	
NEED	Resolve Pending Recommendations			Q1 Adoption Rate	40%-60%	VER	Quarterly	SVE	D1: 11/2006 C	Federal Regulation 23 CFR 627  VE Procedure 625-030-002  1999 AASHTO Guidelines for VE  NCHRP Synthesis 352 - Value Engineering Applications in Transportation
REVIEW	Distribute Study report to project team and Decision Makers			Q2 # of pending rec. per time period		VER	Quarterly	SVE	D2: 12/2006 C	
RESOLUTION MEETING	NO Recommendations not resolved at presentation? YES								D3: 12/2006 C	
RESOLUTION MEETING	Schedule Resolution Meeting								D4: 5/2007 C	
RESOLUTION MEETING	NO Are Decision Makers Available YES								D5: 1/2007 C	
RESOLUTION MEETING	Conduct meeting - Obtain Decisions (Adopt, Modify, Pending, Reject)								D6: 5/2007 C	
RESOLUTION MEETING	NO Decisions Made? YES								D7: 11/2006 C	
MONITOR	Update the database								TPK: 1/2007 C	
MONITOR	Monitor Pending Recommendations									CODES: C- Compliance NC- Noncompliant BP Best Practice

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Approved: \_\_\_\_\_ Date: \_\_\_\_\_ Process Owner: District Value Engineer Rev #: 1.5 Rev Date: 08/2007



# Process Control System

Process Name: Value Engineering Reporting Process.	Product/Service: Report detailing the results of the Value Engineering Program	Primary Customers: Management. Partners: FHWA	Customer's Valid Requirement(s): Prepare accurate and reliable reports	Regulator's Valid Requirement(s): Report accurate results of the Value Engineering Program
--	--	--	--	--

Input(s): Study Results Supplier(s): DVE	Flow Chart		Process and Quality Indicators		Checking / Indicator Monitoring			Miscellaneous Information	
Dept / Person Step / Time	STATE VALUE ENGINEER	DISTRICT VALUE ENGINEER	Process Indicators	Control Limits And Specs / Targets	Checking Item	Timeframe (Frequency)	Responsibility	QAR	- Abbreviations - Procedure Reference - Notes, etc.
			Quality Indicators		What is to be checked?	When to check?	Who will check?	Date of Last Review	
NEED	<div style="border: 1px solid black; border-radius: 15px; padding: 5px; width: fit-content; margin: 5px auto;">Report the results of the VE program to management</div>		P1	# of corrections		Quarterly	SVE	D1: 11/2006 C	Federal Regulation 23 CFR 627
MAINTAIN FILES	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Enter data into VE database at conclusion of study</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">File copy of final study report in District files</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Send copy of final study report to SVE</div>		Q1	Quarterly Reports complete by 30 <sup>th</sup> of month following end of quarter		Quarterly	SVE	D2: 12/2006 C	VE Procedure 625-030-002
DATA VERIFICATION	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Send e-mail reminding DVEs to enter activity for the quarter</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Prepare Draft Quarterly Report &amp; e-mail to Districts</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Correct database and notify SVE</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Review Draft Quarterly Report</div> <div style="text-align: center; margin: 5px auto;"> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">P1</span> →             </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Is Draft Report accurate?</div>		Q2	FHWA Annual Report to Division Office by Nov 1		Annual	SVE	D3: 12/2006 C	1999 AASHTO Guidelines for VE NCHRP Synthesis 352 - Value Engineering Applications in Transportation
REPORT	<div style="text-align: center; margin: 5px auto;"> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">P1</span> →                 </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Is this the Annual Report?</div> <div style="display: flex; justify-content: space-around; margin: 5px auto;"> <div style="border: 1px solid black; padding: 5px; width: 40%;">Prepare Final Annual Report</div> <div style="border: 1px solid black; padding: 5px; width: 40%;">Prepare Final Quarterly Report</div> </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">Prepare Annual FHWA Report</div> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; width: fit-content; margin: 5px auto;">Distribute Reports</div>							D4: 5/2007 C	D5: 1/2007 C
								D6: 5/2007 C	D7: 11/2006 C
								TPK: 1/2007 C	CODES: C- Compliance NC- Noncompliant BP Best Practice

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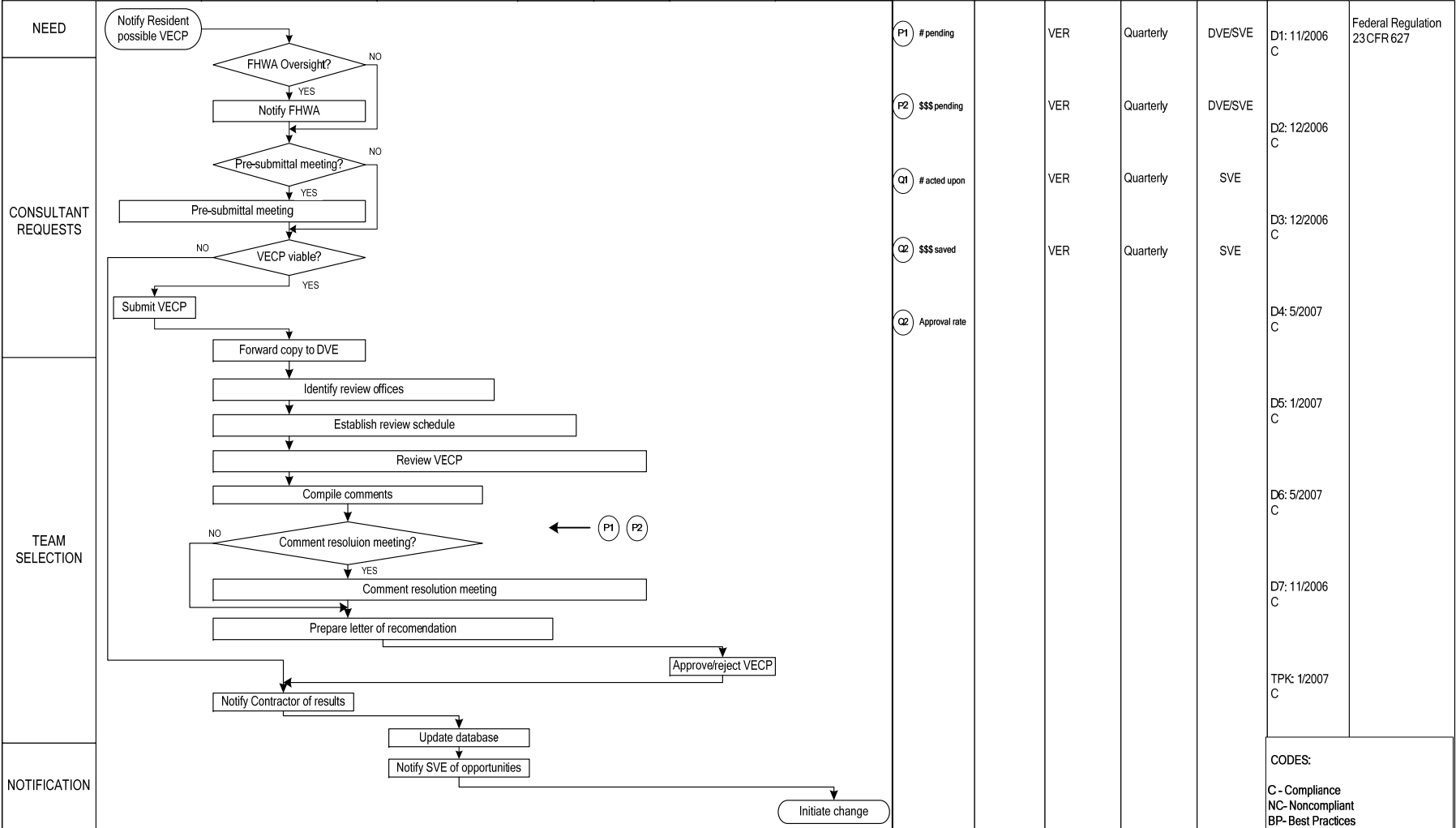
Approved: \_\_\_\_\_ Date: \_\_\_\_\_ Process Owner: State Value Engineer Rev #: 1.5 Rev Date: 8/2007

# Process Control System

**Process Name:** Value Engineering Change Proposal    
**Product/Service:** Resolution on submitted VECP by the contractor    
**Primary Customers:** Management, Contractor    
**Customer's Valid Requirement(s):** Review and either approve or reject the VECP in a timely manner.    
**Regulator's Valid Requirement(s):** Program that encourages the use and resolution of VECP's during construction.

**Input(s):** Contractor Submittal    
**Supplier(s):** Contractor    
**Flow Chart**    
**Process and Quality Indicators**    
**Checking / Indicator Monitoring**    
**Miscellaneous Information**

Step / Time	Dept / Person	CONTRACTOR	RESIDENT ENGINEER	DISTRICT VALUE ENGINEER	DISTRICT ENGINEER		DISTRICT MANAGEMENT	STATE VALUE ENGINEER	Process Indicators	Control Limits	Checking Item	Timeframe (Frequency)	Responsibility	QAR	Miscellaneous Information
					DESIGN	CONST.									



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**Approved:** \_\_\_\_\_    
**Date:** \_\_\_\_\_    
**Process Owner:** District Value Engineer    
**Rev #:** 1.5    
**Rev Date:** 8/2007

**CODES:**  
C - Compliance  
NC - Noncompliant  
BP - Best Practices