Statewide Stormwater & Erosion Control Study

Working Paper #2

Statewide Stormwater & Erosion Control

Project Prioritization Model Process & Findings

June 2020

Prepared For:

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I. INTRODUCTION

The Arizona Department of Transportation (ADOT) expressed the need to conduct a planning study, the Statewide Stormwater Erosion & Control Study (SWSWECS), to identify and prioritize statewide stormwater management and erosion control needs delivered through processes linked to data model that operates with a defined project prioritization framework; develop a model whose output will create a prioritized list of stormwater construction projects to be addressed on an annual program basis; and, ensure that the model is quantitative, comprehensive, replicable, and systematic to inform /augment stormwater management activities and compete in ADOT's annual Planning to Programming (P2P) process.

II. WORKING PAPER #2 PURPOSE

ADOT and many agencies frequently balance a perpetual growing list of new and pending infrastructure construction projects with a limited pool of resources. Deciding how to separate higher priority projects from lower priority projects can be a difficult process; however, the process is a critical exercise to ensure the most important and impactful projects are implemented prior to projects with less importance and impact. Since needs and issues vary and are stretched among the many disciplines and the seven different geographic districts of ADOT, prioritizing projects through a structured and objective approach can be helpful in reaching consensus and balancing the statewide needs in an equitable fashion – the fundamental purpose of ADOT's P2P process, and the essence of this study, integrating statewide stormwater and erosion control projects into the P2P process.

A. ADOT Planning-to-Programming (P2P) Process

The P2P process is a performance-based process resulting in the development of ADOT's draft five-year facilities construction program. The P2P process is conducted annually by ADOT's Multimodal Planning Division (MPD) to prioritize all prospective statewide facility improvements, and the result is a statewide prioritized project list. Although stormwater and erosion control projects are not currently being evaluated through the P2P process, the purpose of ADOT's *SWSWECS Working Paper #2* is to explain the development of a secondary project prioritization process for stormwater and erosion control projects to compete and integrate with other statewide prioritized projects in the P2Pprocess.

B. Purpose and Function of the Project Prioritization Model (PPM)

As part of ADOT's SWSWECS, a Project Prioritization Model (PPM) was developed to effectively evaluate and objectively and equitably rank the 52 statewide projects submitted and described in detail through the development of *SWSWECS Working Paper #1*. The objective of the SWSWECS PPM is to have the highest performing stormwater-based erosion and control projects compete with the other projects evaluated though ADOT's P2P Process – a performance-based project evaluation and prioritization.

Similar to ADOT's P2P processes, the SWSWECS PPM is complex and comprehensive, yet a straightforward excel-based model, which provides a method to sort the diverse set of projects in order of importance based on the set of predetermined criteria that were chosen to address the detrimental effects to the

roadway system created by the negative effects of stormwater runoff. The PPM was calibrated to identify each individual project's relative importance by deriving a numerical value of priority for each project.

The Project Team has carefully crafted and applied the PPM that successfully addresses this project's statement of need to; 1) develop a model whose output will create a prioritized list of stormwater construction projects to be addressed on an annual program basis, and 2) ensure that model is quantitative, comprehensive, replicable and systematic to inform/augment stormwater management activities and compete in the annual ADOT P2P process.

The ADOT SWSWECS PPM consists of three elements that work together to construct an equation that calculates a resulting numerical score for each project. This process is illustrated in **Figure 1** below. The three elements of the PPM include:

1. **The Evaluating Criteria & Scoring Thresholds** which are the set of standards used to quantify the characteristics of a project from both quantitative and qualitative measures;
2. **The Evaluation Criteria Weighting** which is a numerical value assigned to each evaluation criteria that signifies the level of importance of each criteria; and
3. **The Scoring Methodology** that is the framework around how the Evaluation Criteria, Scoring Thresholds, and the Evaluation Criteria Weighting work together to reach a calculated score.

Figure 1: SWSWECS PPM Process Flowchart

The Project Team worked incrementally with the Technical Advisory Committee (TAC) to develop each of these three elements of the SWSWECS PPM. The TAC reviewed and approved the set of evaluation criteria. The following sections of this report will describe how these three elements of the SWSWECS PPM were developed, calibrated, refined and finalized through a TAC consensus-based progression, which resulted in a prioritized list of statewide stormwater projects.

III. DEVELOPMENT OF THE EVALUATION CRITERIA & SCORING THRESHOLDS

The Project Team, in tandem with the ADOT SWSWECS TAC, worked to develop a series of evaluation criteria and weighting to evaluate the 52 statewide projects as part of the SWSWECS PPM to prioritize the stormwater projects submitted by the seven ADOT Districts. The evaluation criteria were crafted to be diverse in nature through the combination of quantitative perspectives - pulling data and information from Working Paper #1 - as well as qualitive characteristics identifying specific features of the projects that impact their importance, and impact to ADOT assets in the right-of-way and adjacent properties.

A. Project Team Drafting and Vetting

The first step in developing the evaluation criteria was to identify four essential categories to measure the 52 projects. The Project Team combined previous experiences from Arizona and other states with industry best practices in stormwater and transportation project evaluation to reach the following four categories to assess the statewide projects:

1. Protect Public Health/Safety of Adjacent Property
2. Environmental Benefits/ Regulatory Mandates
3. Economic/ Operational/ Asset Management Benefits
4. Implementation Complexity

Once the evaluation criteria categories were selected, the Project Team created a preliminary list of evaluation criteria for each category. The process included researching regulatory mandates across the state and with ADOT; understanding what issues were of highest importance for the ADOT Districts; communicating with ADOT to understand strategic initiatives of the highest value within the agency; investigating measures to evaluate the level of difficulty of implementation; assessment of the costs to construct a stormwater project (i.e. capital improvement, maintenance, and life cycle costs); and discussing the impact to resources, reduction of flooding, and hazard mitigation in association of the project. The Project Team also worked with ADOT to collect a wide range of data, and through data analytics and interpretation, the Project Team used FIS, PECOS, ADOTS Photo Log, ADOT District phone interviews, and data collected from the Arizona Department of Environmental Quality (ADEQ) including water of the US, the impaired waters and outstanding water lists to evaluate the environmental considerations and create a comprehensive list of datasets to include as inputs in the SWSWECS PPM.

As a result, 13 different evaluation criteria were initially developed within the four categories to use in the SWSWECS PPM. **Table 1** on the following page describes the different evaluation criteria for each category.

Table 1: SWSWECS PPM Evaluation Criteria & Scoring Thresholds

Category		Evaluation Criteria	Scoring Threshold	Score
Protect Public Health/Safety of Adjacent Property	1	Project eliminates or reduces flooding or property damage of adjacent property.	Yes	Positive Score
			No	Neutral Score
	2	Existing frequency in which stormwater causes roadway closures and/or restrictions.	Yes	Positive Score
			No	Neutral Score
	3	Existing frequency of which stormwater negatively impacts roadway or adjacent property.	N/A**	Positive Score
			N/A**	Neutral Score
Environmental Benefits/ Regulatory Mandates	4	Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).	< 1 mile	Positive Score
			> 1 mile	Neutral Score
	5	Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.	< ¼ mile	Positive Score
			> ¼ mile	Neutral Score
	6	Project location has a TMDL already in place.	Yes	Positive Score
			No	Neutral Score
Economic/ Operational/ Asset Management Benefits	7	Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?	Yes	Positive Score
			No	Neutral Score
	8	Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *	>15%	Positive Impact
			10% - 15%	Partial Positive Impact
			5% - 10%	Partial Positive Impact
			<5%	Neutral Impact
	9	Impact to the structural integrity of existing ADOT assets in the ROW.	Roadway	Positive Impact
			Side slopes	Partial Positive Impact
			Conveyance Channels, Catch Basin, Etc.	Partial Positive Impact
			None	Neutral Impact
	10	Project is identified by the ADOT District as a priority.	Priority 1-3	Positive Impact
			Priority 4-6	Partial Positive Impact
			Priority 7+	Neutral Impact
Implementation Complexity	11	Project can be completed entirely within the existing ADOT ROW.	Yes	Positive Score
			No	Neutral Score
	12	Project is located within ADOT ROW or an easement upon public lands.	ADOT ROW	Positive Score
			Public Easement	Neutral Score
	13	Opportunity to leverage financial partner participation.	Yes	Positive Score
			No	Neutral Score

**Corresponds to ADOT P2P Modernization technical evaluation criteria ** Not Applicable as this criterion was eliminated for further consideration prior to the determination of scoring thresholds*

B. ADOT District Survey: Weighting the Evaluation Criteria

Once the initial draft list of evaluation criteria was finalized, the next step was to formulate and assign a weighting value to each criterion. The weight of the criterion is a numeric value that represents the level of importance of each criterion. The weights are then used to calculate the results of the evaluation of each criterion – the higher the weight results in a higher score for that criterion.

In order to reach a weight for each criterion, the Project Team developed an excel-based survey to distribute to the seven different ADOT Districts, ADOT Environmental Planning, and the ADOT MPD to populate their perceived importance of each criterion. The survey included in-depth instructions on how to populate the excel-based tool. The ADOT Districts, Environmental Planning, and MPD were asked to assign each criterion a numeric value on a scale of 100 based on their perceived level of importance. For example, the survey included the revised 1 criterion, so a completely balanced weight among the criterion would be 7.69 – the value of equilibrium.

100	**/**	**13**	**=**	**7.69**
Weighted total		*# of Criterion*		*Value of Equilibrium*

The Project Team asked in the survey to adjust the value of equilibrium, by increasing or decreasing the number, based on their perception of importance of each criterion among each other. The provided responses from each of the ADOT Districts, ADOT Environmental Planning, and ADOT MPD were averaged to arrive at a final weight for each evaluation criteria.

The results of the criteria weighting survey show that the seven ADOT Districts, the ADOT Environmental Planning, and ADOT MPD shared some commonalities in their perceptions of which criterion are the most important, while also some groups assigned a large portion of the points to the criteria that specifically align with their goals and objectives of their group. For instance, the ADOT Environmental Planning dedicated nearly two-thirds of the total overall weight to just two criterion – *Criterion 1: Existing frequency in which stormwater causes roadway closures and/or restrictions,* and *Criterion 9: Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW* – significantly increasing the weight to these two criterion compared to the other evaluation criteria.

All of the respondents assigned higher values than the value of equilibrium to:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property;*
- *Criterion 2: Existing frequency in which stormwater causes roadway closures and/or restrictions; and*
- *Criterion 3: Existing frequency of which stormwater negatively impacts roadway or adjacent property.*

On the other hand, all respondents assigned lower values than the value of equilibrium to:

- *Criterion 6: Project location has a TMDL already in place*;
- *Criterion 8: Percentage of freight flow movement (T-Factor) reported on the ADOT corridor*; and
- *Criterion 13: Opportunity to leverage financial partner participation.*

The remaining four criteria had a range of values assigned to them by the stakeholders which were both above and below the value of equilibrium.

Table 2 shows the original thirteen evaluation criteria and their respective weights assigned to each criterion based on the results of the ADOT District survey and refinement of the evaluation criteria.

C. Refinement of the Evaluation Criteria

As the Project Team began to apply the results of the survey to weight the criteria, compared to the draft evaluation criteria developed, it became evident that the Project Team did not have sufficient or consistent information/feedback from all ADOT Districts to accurately assess the previously identified "existing frequency in which stormwater negatively impacts the roadway or adjacent property" criterion. As a result, this criterion was eliminated. Another important consideration in eliminating this criterion was the fact that this item would also be a challenge for ADOT to apply internally when evaluating stormwater projects in future years after this project is completed.

In this analysis, it was felt by the Project Team that three other evaluation criteria - #1, #2 and #8, are very much related and capture the intent of the evaluation criterion that was eliminated. In fact, it was felt that a couple of these likely overlap and/or are redundant, so eliminating a criterion was not felt to be an omission and/or negative impact to the intent or outcome of this exercise.

Since the ADOT District survey responses included the evaluation criterion that is now eliminated, the value/points assigned to this previous evaluation criterion were equally distributed amongst evaluation criteria #1, #2 and #8 since they are similar in their intent – i.e., describing direct impacts to the ADOT ROW or adjacent property.

Table 3 illustrates the application of the ADOT District survey results and application of the weighting to each of the 12 evaluation criteria.

In order to confirm the evaluation criteria to be used in the prioritization model, the refined evaluation criteria and assigned weights were distributed to the TAC for review and comment. No comments were received.

Table 2: SWSWECS TAC Evaluation Criteria Weighting Survey Results

Category		Evaluation Criteria	ADOT District and Stakeholder Response									Average Weight	Criterion Rank
			Northcentral District	Northeast District	Northwest District	Central District	Southcentral District	Southeast District	Southwest District	ADOT Environmental	ADOT MPD		
Protect Public Health/Safety of Adjacent Property	1	Project eliminates or reduces flooding or property damage of adjacent property.	16	10	*NR*	6	11	10	10	0	10	9.13	**5**
	2	Existing frequency in which stormwater causes roadway closures and/or restrictions.	13	12	*NR*	8	8	10	10	25	15	12.63	**1**
	3	Existing frequency of which stormwater negatively impacts roadway or adjacent property.	14	11	*NR*	8	10	10	10	25	10	12.25	**2**
Environmental Benefits/ Regulatory Mandates	4	Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).	4	2	*NR*	6	8	6	8	10	10	6.75	**7**
	5	Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.	6	3	*NR*	6	7	5	10	10	10	7.13	**6**
	6	Project location has a TMDL already in place.	5	1	*NR*	6	6	7	7	5	5	5.25	**10**
Economic/ Operational/ Asset Management Benefits	7	Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?	8	7	*NR*	8	9	8	5	0	3	6.00	**9**
	8	Percentage of freight flow movement (T-Factor) reported on the ADOT corridor. *	7	5	*NR*	9	4	7	5	0	5	5.25	**11**
	9	Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.	9	16	*NR*	10	11	10	5	25	7	11.63	**3**
	10	Project is identified by the ADOT District as a priority.	12	13	*NR*	10	10	9	10	0	10	9.25	**4**
Implementation Complexity	11	Project can be completed entirely within the existing ADOT ROW.	2	7	*NR*	8	7	8	10	0	8	6.25	**8**
	12	Project is located within ADOT ROW or an easement upon public lands.	1	9	*NR*	8	4	6	5	0	5	4.75	**12**
	13	Opportunity to leverage financial partner participation.	3	4	*NR*	7	5	4	5	0	2	3.75	**13**
		Total	**100**	**100**	**0**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	

**Corresponds to ADOT P2P Modernization technical evaluation criteria*
NR = no response

Table 3: Final Set of 12 SWSWECS PPM Evaluation Criteria and Weighting

Category		Evaluation Criteria	Scoring Threshold	Score	Weight
Protect Public Health/Safety of Adjacent Property	1	Project eliminates or reduces flooding or property damage of adjacent property.	Yes	Positive Score	**13.21**
			No	Neutral Score	
	2	Existing frequency in which stormwater causes roadway closures and/or restrictions.	Yes	Positive Score	**16.71**
			No	Neutral Score	
Environmental Benefits/ Regulatory Mandates	3	Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).	< 1 mile	Positive Score	**6.75**
			> 1 mile	Neutral Score	
	4	Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.	< ¼ mile	Positive Score	**7.13**
			> ¼ mile	Neutral Score	
	5	Project location has a TMDL already in place.	Yes	Positive Score	**5.25**
			No	Neutral Score	
Economic/ Operational/ Asset Management Benefits	6	Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?	Yes	Positive Score	**6.00**
			No	Neutral Score	
	7	Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *	>15%	Positive Impact	**5.25**
			10% - 15%	Partial Positive Impact	
			5% - 10%	Partial Positive Impact	
			<5%	Neutral Impact	
	8	Impact to the structural integrity of existing ADOT assets in the ROW.	Roadway	Positive Impact	**15.71**
			Side slopes	Partial Positive Impact	
			Conveyance Channels, Catch Basin, Etc.	Partial Positive Impact	
			None	Neutral Impact	
	9	Project is identified by the ADOT District as a priority.	Priority 1-3	Positive Impact	**9.25**
			Priority 4-6	Partial Positive Impact	
			Priority 7+	Neutral Impact	
Implementation Complexity	10	Project can be completed entirely within the existing ADOT ROW.	Yes	Positive Score	**6.25**
			No	Neutral Score	
	11	Project is located within ADOT ROW or an easement upon public lands.	ADOT ROW	Positive Score	**4.75**
			Public Easement	Neutral Score	
	12	Opportunity to leverage financial partner participation.	Yes	Positive Score	**3.75**
			No	Neutral Score	

**Corresponds to ADOT P2P Modernization technical evaluation criteria*

D. Development of the Three Potential Scoring Methodologies

After the weights of the evaluation criteria were developed and confirmed by the TAC, the Project Team developed three different scoring methodologies for possible consideration for the PPM. The scoring methodology is the element of the PPM that measures each of the projects within the scoring threshold of each evaluation criteria.

For example, *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*, has a positive impact or neutral impact whether a project will eliminate or reduce flooding or property damage as a result if implementation. The scoring methodologies define what the magnitude or measurement of the positive impact or neutral impact to be applied. **Table 4** below describes the three scoring methodologies developed and each methodology is described in more detail in the following three sections.

Table 4: The Three Potential Scoring Methodologies

Scoring Threshold Result	Scoring Methodology 1	Scoring Methodology 2	Scoring Methodology 3
Positive Score	Full Weighted Points	3 * Weight	2 * Weight Value
Partial Positive Score*	One-half of the Weight Value Two-thirds of the Weight Value	2 * Weight Value	1 * Weight Value
Partial Positive Score*	One-third of the Weight Value	1 * Weight Value	0.5 * Weight
Neutral Score	Zero Points	Zero Points	Zero Points

**Partial scores applied only on an as needed basis.*

SCORING METHODOLOGY 1

Unlike the other two scoring methodologies, Scoring Methodology 1 uses the weighted value as the directly applied scoring value. The highest possible points is awarded the full weighted value while the lowest possible point value is zero points. As previously noted, some evaluation criteria contain more than two scoring thresholds, and a simple equation is applied in Scoring Methodology 1 to arrive at a partial positive value stemming from the weighted value. For instance, evaluation criteria with two thresholds arrive at the partial positive score by using half of the weighted score; while the evaluation criteria with four thresholds use two-thirds and one-third of the weighted value to arrive at the two partial positive scores.

SCORING METHODOLOGY 2

Scoring Methodology 2 is different from Scoring Methodology 1 in that the approach uses a scale of numbers based on the Scoring Thresholds multiplied by the weight value. As displayed in **Table 4**, the highest possible points a project can receive is a score of three (3) multiplied by the weight value, and similar to Scoring Methodology 1, the lowest possible point value a project can receive is zero. Evaluation

criteria with more than two scoring thresholds, a project receives a score of two or one multiplied by the weight value to arrive at the partial positive scores.

SCORING METHODOLOGY 3

Scoring Methodology 3, is similar to Scoring Methodology 2 in that the approach uses a scale of numbers based on the Scoring Thresholds multiplied by the weight value. As displayed in **Table 4**, the highest possible points a project can receive is a score of 2 multiplied by the weight value, and similar to Scoring Methodology 1 and 2, the lowest possible point value a project can receive is zero. Evaluation criteria with more than two scoring thresholds, a project receives a score of either one or one-half multiplied by the weight value to arrive at the partial positive scores.

E. Choosing a Scoring Methodology

The Project Team worked together to determine a preferred Scoring Methodology by running the PPM with all three different scoring methodologies for comparison purposes. Once each of the three PPMs were successfully calibrated, the Project Team compared the prioritized results of the 52 submitted projects for each of the three iterations. The Project Team evaluated the results to identify if there was any variation (outliers or unusual results) in the ranking order of the 52 projects among the three iterations of the PPM using the three different scoring methodologies.

The group concluded that there was no significant variation in the ranking between the three methodologies and decided to select Scoring Methodology 1 as the preferred methodology for a few different reasons. First, this methodology minimized the potential for subjectivity into the equation since the weighted values for the evaluation criteria were developed essentially through the TAC as part of the Evaluation Criteria Weighting Survey. Also, the group thought the scale of 100 points linked to the weighting values and the smaller value outputs created an easy to understand score that can be replicated for ADOT's future internal use in future years. Third, this methodology was found to be most preferred by ADOT since it has the strongest correlation to the ADOT methods used in ranking projects in the P2P process.

Another element to note is that some projects resulted in identical score once the PPM was fully calibrated with Scoring Methodology 1. For example, two projects scored 59.67 points resulting in each project to have the 15th highest score – or in other words – both projects ranked 15th (NED – K and NED – A). For the purposes of this project and to avoid adding any additional level of subjectivity on how to determine precedence between projects with identical scores or ranks, the two projects will be awarded the same rank. As per the example noted above, both NED – K and NED – A were assigned a Rank 15.5 to assimilate equal importance or precedence. As a result, there would be no 16th ranked project and the next ranked project in descending order would be the 17th ranked project. Out of the entire 52 submitted projects, there are three pairs of projects that have identical scores or ranks:

- Rank 15.5: NED – K and NED – A (59.67 points);
- Rank 29.5: NED – B and NWD – B (44.96 points); and
- Rank 51.5: NED – H and NED – I (13.97 points).

As these projects move through the ADOT P2P process and evolve towards implementation, ADOT will need to do another level of qualitative evaluation if there is a need to determine precedence between any two projects with an identical score or rank.

IV. PRIORITIZATION MODEL RESULTS OVERVIEW

This section describes the result the SWSWECS PPM which evaluates and ranks the 52 stormwater projects submitted by the ADOT Districts using the Evaluation Criteria, Scoring Thresholds and Scoring Methodology 1 discussed in the previous sections.

A. Statewide Results Summary

A total of 52 projects were submitted by the seven ADOT Districts which were run through the SWSWECS PPM. The breakdown of the number of projects submitted by District are as follows:

- Northeast District – 11 projects
- Northcentral District – 6 projects
- Northwest District – 4 projects
- Central District – 3 projects
- Southeast District – 10 projects
- Southcentral District – 8 projects
- Southwest District – 10 projects

A total of two projects were added by the Southcentral District since the *SWSWECS Working Paper #1* was completed. This brought the total projects from 50 projects to 52 projects. The Project Team worked with the Southcentral District to collect all the necessary data and recalibrate the SWSWECS PPM to include the two newly added projects.

The highest score a project could potentially receive through Scoring Methodology 1 would be 100 points. Meaning that project would receive the full weighted value for each evaluation criterion, or in other words, the project would fall in the top scoring threshold for all evaluation criteria. There were no projects that received a perfect score and the results ranged with the highest scoring project receiving 83.88 points out of 100 possible points, meanwhile, the lowest scoring project receiving 13.97 points out of 100 possible points. The average score across all fifty-two projects is just under half the possible points at 48.92 points. Refer to **Table 5** for the list of all projects with their corresponding score and ranks.

STATEWIDE TOP 20 PROJECTS

ADOT advised the Project Team that the Agency would first like to evaluate the Top 20 projects as potential candidate projects to be considered for scoping and consideration for funding under the P2P process. Thus, the Project Team has highlighted the Statewide Top 20 ranked projects in **Table 6**.

The difference between the first ranked project and the twentieth ranked project was approximately 28 points. The average score within the Top 20 Projects is 64.27 points. The spread between ranks is typically between one and three points with the exception of the spread between first and second ranked projects, and the second and third ranked projects, which had a spread of 7.83 point and 5.38 points respectively. This reflects the fact that there are no outliers among the Statewide Top 20 Projects as they are closely grouped together even with a range of approximately 28 points between the first and twentieth ranked projects.

All seven ADOT Districts have at least one project in the Statewide Top 20 Projects and are fairly evenly distributed amongst the Districts, with the exception of the Southeast and Southwest Districts, which both have five Top 20 Projects. The distribution of the Top 20 Projects amongst the ADOT Districts are as follows:

- Northeast District – 3 Top 20 Projects
- Northcentral District – 2 Top 20 Projects
- Northwest District – 2 Top 20 Projects
- Central District – 2 Top 20 Projects
- Southeast District – 5 Top 20 Projects
- Southcentral District – 1 Top 20 Project
- Southwest District – 5 Top 20 Projects

Table 5: Statewide Project Ranking Summary

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
NED	NED - A	US 191	389.3	Area floods regularly and completely fills drainage.	59.67	15.5
NED	NED - B	US 160	420	Erosion threatening roadway.	44.96	29.5
NED	NED - C	US 160	380.7-363.6	PA for pipe erosion.	41.21	38
NED	NED - D	SR 264	447.3	Flooding issues of a local school track and field.	33.11	44
NED	NED - E	SR 73	313	Slope erosion.	27.13	50
NED	NED - F	US 180	415.6-415.7	Stormwater erosion and roadway scour issues.	54.09	21
NED	NED - G	US 160	373.3, 396	Severe deposition of material after each storm.	45.67	28
NED	NED - H	US191	472	Significant down-cutting in ditch.	13.97	51.5
NED	NED - I	SR 264	417+/-	Severe erosion in cut ditches.	13.97	51.5
NED	NED - J	I-40	287 EB	Slow lane and onramp shoulders wash out.	58.42	17
NED	NED - K	SR 377	8,13,24	During large rain storms the water overtops the road requiring a traffic detour.	59.67	15.5
NCD	NCD - B	US 89	506.3 & 507.3 (Tanner Wash)	Tanner Wash getting closer to US 89, potential for highway failure.	42.96	36
NCD	NCD - C	US 89A	556	Wash on the north side of US 89A at MP 556 is within 5-feet of highway.	38.96	40
NCD	NCD - D	SR 98	299	Pipes are 15 to 20-feet below grade at inlet causing highway to act as dam.	27.38	49
NCD	NCD - E	SR 87	239.5 (Hog Wash)	Private citizen dumps construction material upstream clogging culvert and causing sediment build up.	32.40	46
NCD	NCD - F	US 160	322-325 (Tuba City)	Flowing water and mud/debris overtops roadway.	65.05	9
NCD	NCD - G	US 160	356	Pipe issues results in culvert plugged with sediment and flows overtop roadway.	65.63	8
NWD	NWD - A	I-40	144.0 WB	Flows from breach in berm of nearby drainage basin causing erosion and sedimentation of north slope and box culverts, resulting in roadway overtopping.	67.67	5
NWD	NWD - B	SR 95	165.3 - 165.4 SB/NB	The roadway is being compromised from the clogging of two culverts and overtopping of flows.	44.96	29.5
NWD	NWD - C	US 93	157.6 SB, Cotton Wood Canyon	There is no support for slope except the strength of rock underlying fill and overhanging the scoured section.	53.96	22
NWD	NWD - D	I-17	237, SE corner of NB Birdge over Moore's Gulch	Scour occurring along the abutment embankment of the corner of the bridge.	55.96	20
CD	CD - A	SR 347	SR 238 to GRIC Boundary	Erosion, bank protection and/or curb and gutter needed.	65.68	7
CD	CD - B	I-10	163.9 - Queen Creek TI	Unstable slopes, extreme rutting and pole foundations exposed.	32.97	45
CD	CD - C	SR 238	24.00 – 44.24	Highway experiences frequent flooding at low points, often causing roadway closures.	62.17	11

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
SED	SED - A	US 60	229.2 to 229.45	Stormwater will not drain at bridge and overtops roadway resulting in erosion.	76.05	2
SED	SED - B	SR 288	289	Stormwater overtops roadway resulting in erosion.	43.13	35
SED	SED - C	US 70	380.46	Channel sedimentation, overtopping by railroad.	68.09	4
SED	SED - D	SR 186	343-350 & 358, Wilcox to Kansas Settlement	Low water crossings.	56.75	19
SED	SED - E	SR 181	51, 55 & 60	Low water crossings.	41.79	37
SED	SED - F	SR 266	210, Gillespie Wash	Outlet scour protection.	31.31	47
SED	SED - G	US 60	262-263	Embankment flumes scoured out needing reconstruction.	46.21	27
SED	SED - H	SR 177	166.7	Significant erosion on outlet side of 48-inch CMP.	37.89	42
SED	SED - I	SR 288	265.3	Culvert restoration of undersized aged structure.	62.00	12
SED	SED - J	SR 88	220.2 - 229.2	Culvert restoration.	61.17	14
SCD	SCD - A	WB I-10-Frontage Rd. (Pomerene Rd & Ramsey Rd)	306 & 306.917 (Benson)	Sediment upstream and downstream needs to be removed. Standard maintenance equipment will not fit in the 5-foot high box culverts.	43.47	34
SCD	SCD - B	WB I-10	306.9 (Benson-San Pedro River Bridge)	Tanner Wash getting closer to US 89, potential for highway failure.	44.10	33
SCD	SCD - C	SB SR 80	306.079 (St David)	Wash on the north side of US 89A at MP 556 is within 5-feet of highway.	39.46	39
SCD	SCD - D	SR 386	306.079 4.37, 6.05, 6.58, 7.5, 11.1 - Three Points	Pipes are 15 to 20-feet below grade at inlet causing highway to act as dam.	35.07	43
SCD	SCD - E	EB/WB I-10, Marsh Station Rd., UPRR, Ramps	289.41-291.70 (Marsh Station)	Scour slopes eroding.	37.99	41
SCD	SCD - F	I-19	8.9-9.1 (Nogales)	Scour slopes eroding.	44.36	32
SCD	SCD - G	SR 286	24.957	Roadway overtopping and sever erosion on NB side due to undersized CMP pipes at wash location.	63.67	10
SCD	SCD - H	SR 286	10.6	Considerable shoulder erosion and lateral migration of channel on downstream side of SR 286 crossing	46.92	26
SWD	SWD - A	US 95 / SR 95	65.2, 66.5, 66.9, 69.3, 92.1, 92.5, 92.9, 110.8, & 112.5	Nine low water crossings causing pavement erosion.	70.67	3
SWD	SWD - B	US 95	54-56	Stormwater run-off eroding shoulders.	83.88	1
SWD	SWD - C	I-8	WB 117.95	Flowing through box culvert flooding residential property.	61.93	13
SWD	SWD - D	Pacific Ave	Ave 2E Underpass Structure #1381	Stormwater flows damaging residential subdivision.	57.35	18
SWD	SWD - E	US 95	Fortuna Wash	Stormwater flows erosion threatening flooding of adjacent properties.	48.38	24
SWD	SWD - F	US 95	69.83-70.04	Wash cutting into roadway during storm events causing pavement undermining.	67.59	6
SWD	SWD - G	I-10	31.5-32.5	Roadway overtopping occurs during large storm events.	30.57	48
SWD	SWD - H	SR 85	139.81-141.11	Water overtopping bank of the wash into the median eroding the roadway shoulders.	47.79	25
SWD	SWD - I	I-10	18.89	Flooding occurs in southeast quadrant of structure threatening mobile businesses.	51.54	23
SWD	SWD - J	I-10	WB 95.8-97.5	Agricultural run-off compromising pavement section.	44.79	31

Table 6: Top 20 Ranked Projects

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
SWD	*SWD - B*	*US 95*	*54-56*	*Stormwater run-off eroding shoulders.*	**83.88**	**1**
SED	*SED - A*	*US 60*	*229.2 to 229.45*	*Stormwater will not drain at bridge and overtops roadway resulting in erosion.*	**76.05**	**2**
SWD	*SWD - A*	*US 95 / SR 95*	*65.2, 66.5, 66.9, 69.3, 92.1, 92.5, 92.9, 110.8, & 112.5*	*Nine low water crossings causing pavement erosion.*	**70.67**	**3**
SED	*SED - C*	*US 70*	*380.46*	*Channel sedimentation, overtopping by railroad.*	**68.09**	**4**
NWD	*NWD - A*	*I-40*	*144.0 WB*	*Flows from breach in berm of nearby drainage basin causing erosion and sedimentation of north slope and box culverts, resulting in roadway overtopping.*	**67.67**	**5**
SWD	*SWD - F*	*US 95*	*69.83-70.04*	*Wash cutting into roadway during storm events causing pavement undermining.*	**67.59**	**6**
CD	*CD - A*	*SR 347*	*SR 238 to GRIC Boundary*	*Erosion, bank protection and/or curb and gutter needed.*	**65.68**	**7**
NCD	*NCD - G*	*US 160*	*356*	*Pipe issues results in culvert plugged with sediment and flows overtop roadway.*	**65.63**	**8**
NCD	*NCD - F*	*US 160*	*322-325 (Tuba City)*	*Flowing water and mud/debris overtops roadway.*	**65.05**	**9**
SCD	*SCD - G*	*SR 286*	*24.957*	*Roadway overtopping and sever erosion on NB side due to undersized CMP pipes at wash location.*	**63.67**	**10**
CD	*CD - C*	*SR 238*	*24.00 – 44.24*	*Highway experiences frequent flooding at low points, often causing roadway closures.*	**62.17**	**11**
SED	*SED - I*	*SR 288*	*265.3*	*Culvert restoration of undersized aged structure.*	**62.00**	**12**
SWD	*SWD - C*	*I-8*	*WB 117.95*	*Flowing through box culvert flooding residential property.*	**61.93**	**13**
SED	*SED - J*	*SR 88*	*220.2 - 229.2*	*Culvert restoration.*	**61.17**	**14**
NED	*NED - A*	*US 191*	*389.3*	*Area floods regularly and completely fills drainage.*	**59.67**	**15.5**
NED	*NED - K*	*SR 377*	*8,13,24*	*During large rain storms the water overtops the road requiring a traffic detour.*	**59.67**	**15.5**
NED	*NED - J*	*I-40*	*287 EB*	*Slow lane and onramp shoulders wash out.*	**58.42**	**17**
SWD	*SWD - D*	*Pacific Ave*	*Ave 2E Underpass Structure #1381*	*Stormwater flows damaging residential subdivision.*	**57.35**	**18**
SED	*SED - D*	*SR 186*	*343-350 & 358, Wilcox to Kansas Settlement*	*Low water crossings.*	**56.75**	**19**
NWD	*NWD - D*	*I-17*	*237, SE corner of NB Birdge over Moore's Gulch*	*Scour occurring along the abutment embankment of the corner of the bridge.*	**55.96**	**20**

B. Summary of Findings and Trends in the Statewide Top 20 Project Results

The results captured in the Statewide Top 20 Projects reflect a direct application of the criteria and assigned weights that were established through the District survey results/feedback. Typically, the projects that each District ranked as their own high priority were often also ranked higher in this statewide analysis and the overall results reflect a consistent and equitable application of the evaluation criteria across all statewide project types.

This scoring trend is directly related to the fact that these projects (like all the Statewide Top 20 ranked projects) scored high in the four (4) highest weighted evaluation criteria. Of the 12 criteria, the top four (4) weighted criteria contain 55% of the total possible points, yielding greater emphasis on these four criteria. These top four criteria are; #1 - "Existing frequency in which stormwater causes roadway closures and/or restrictions" (16.71 points), #2 – "Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW" (15.71 points), #3 – "Project eliminates or reduces flooding or property damage of adjacent property" (13.21 points), and #4 – "Project is identified by the ADOT District as a priority" (9.25 points).

There are a couple of Districts however where a few projects that were ranked lower by the District, actually ended up ranking higher on a statewide level. These include the Northeast District, Project's J and K and the Northcentral District Project's F and G. In these instances, not only did these projects score high in the top four criteria, but they also received a higher score due to the fact that they also received points for being located along an ADOT corridor of significance (Criteria #6), have a higher percentage of freight traffic (T-factor, Criteria #7) and that these projects can be completed within the existing ADOT ROW (Criteria #10).

C. District by District Results Review/Summary

The following sections include the overall score of each project with some basic project information. Please refer to **Appendix A** for detailed results of the SWSWECS PPM for each District.

NORTHEAST DISTRICT (NED) RESULTS

The Northeast District submitted 11 projects for consideration. Three of them made it into the Statewide Top 20 Projects list while one of the District's projects fell just outside of the Top 20 ranking at 21st with 54.09 points.

The three projects that scored in the Top 20 Projects and the 21st ranked project score higher than the other remaining seven projects within the District because they either score in the top scoring threshold for all or some combination of the following evaluation criteria:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*;
- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.; and
- *Criterion 8: Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW*.

As previously noted, these three evaluation criteria significantly influence the results as these evaluation criteria represent the three highest weights of 13.21 points, 16.71 points, and 15.71 points.

However, another interesting observation about the results of the Northeast District projects is related to *Criterion 9: Project is identified by the ADOT District as a priority.* The District's highest priority project (NED – A) was one of their highest scoring projects, while on the other hand, their two lowest priority projects (NED-I and NED-K) were also one of their top scoring projects. This is because *Criterion 9: Project is identified by the ADOT District as a priority* has a much lower weight of 9.25 points – although the fourth highest weight – the Criterion does not have as much of an influence on the overall score as the top three evaluation criteria previously discussed.

Table 7 on the following page includes a summarized list of the Northeast District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 7: Northeast District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
NED	*NED - A*	*US 191*	*389.3*	*Area floods regularly and completely fills drainage.*	**59.67**	**15.5**
NED	*NED - B*	*US 160*	*420*	*Erosion threatening roadway.*	**44.96**	**29.5**
NED	*NED - C*	*US 160*	*380.7-363.6*	*PA for pipe erosion.*	**41.21**	**38**
NED	*NED - D*	*SR 264*	*447.3*	*Flooding issues of a local school track and field.*	**33.11**	**44**
NED	*NED - E*	*SR 73*	*313*	*Slope erosion.*	**27.13**	**50**
NED	*NED - F*	*US 180*	*415.6-415.7*	*Stormwater erosion and roadway scour issues.*	**54.09**	**21**
NED	*NED - G*	*US 160*	*373.3, 396*	*Severe deposition of material after each storm.*	**45.67**	**28**
NED	*NED - H*	*US191*	*472*	*Significant down-cutting in ditch.*	**13.97**	**51.5**
NED	*NED - I*	*SR 264*	*417+/-*	*Severe erosion in cut ditches.*	**13.97**	**51.5**
NED	*NED - J*	*I-40*	*287 EB*	*Slow lane and onramp shoulders wash out.*	**58.42**	**17**
NED	*NED - K*	*SR 377*	*8,13,24*	*During large rain storms the water overtops the road requiring a traffic detour.*	**59.67**	**15.5**

NORTHCENTRAL DISTRICT (NCD) RESULTS

The Northcentral District submitted six total projects and two of them scored in the Statewide Top 20 Projects. The District's top scoring projects were NCD – F and NCD – G scoring less than a point different between the two at 65.05 points and 65.63 points respectively.

Similar to the results for the Northeast District, the Northcentral District's top priority projects did not score as high, while their two lowest priority projects (NCD – F and NCD – G) scored the highest. The reasoning for this is because NCD – F and NCD – G were the only two projects to score well in two of the top three weighted criterion, which include:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*; and
- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.

These two criteria have a weight of 13.21 points and 16.71 points, separating these two projects from the other four projects by nearly 30 total points, which is evident in the results. Refer to **Table 8** on the following page for a summarized list of the Northcentral District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 8: Northcentral District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
NCD	*NCD - B*	*US 89*	*506.3 & 507.3 (Tanner Wash)*	*Tanner Wash getting closer to US 89, potential for highway failure.*	**42.96**	**36**
NCD	*NCD - C*	*US 89A*	*556*	*Wash on the north side of US 89A at MP 556 is within 5-feet of highway.*	**38.96**	**40**
NCD	*NCD - D*	*SR 98*	*299*	*Pipes are 15 to 20-feet below grade at inlet causing highway to act as dam.*	**27.38**	**49**
NCD	*NCD - E*	*SR 87*	*239.5 (Hog Wash)*	*Private citizen dumps construction material upstream clogging culvert and causing sediment build up.*	**32.40**	**46**
NCD	*NCD - F*	*US 160*	*322-325 (Tuba City)*	*Flowing water and mud/debris overtops roadway.*	**65.05**	**9**
NCD	*NCD - G*	*US 160*	*356*	*Pipe issues results in culvert plugged with sediment and flows overtop roadway.*	**65.63**	**8**

NORTHWEST DISTRICT (NWD) RESULTS

The Northwest District submitted four total projects for consideration, with two of the projects scoring in the Statewide Top 20 Projects. The two projects are NWD – A ranking fifth and NWD – D ranking 20th scoring 67.67 points and 55.96 points respectively. The Northwest District also had one project (NWD – C) just fall out of the Top 20 Projects ranking 22nd and scoring only two points lower than NWD – D at 53.96 points.

Similar to Northcentral Districts top scoring projects, Northwest District's top scoring project NWD – A scored significantly higher than the rest of the District's projects because it's the only project that scored in two of the top three weighted criterion, which include:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*; and
- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.

These two criteria have a weight of 13.21 points and 16.71 points, significantly increasing the score of NWD – A compared to the other three projects. Another noteworthy observation is that NWD – D scored high in all other evaluation criteria to propel its ranking into the Statewide Top 20 Projects. Refer to **Table 9** on the following page for a summarized list of the Northwest District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 9: Northwest District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
NWD	*NWD - A*	*I-40*	*144.0 WB*	*Flows from breach in berm of nearby drainage basin causing erosion and sedimentation of north slope and box culverts, resulting in roadway overtopping.*	**67.67**	**5**
NWD	*NWD - B*	*SR 95*	*165.3 - 165.4 SB/NB*	*The roadway is being compromised from the clogging of two culverts and overtopping of flows.*	**44.96**	**29.5**
NWD	*NWD - C*	*US 93*	*157.6 SB, Cotton Wood Canyon*	*There is no support for slope except the strength of rock underlying fill and overhanging the scoured section.*	**53.96**	**22**
NWD	*NWD - D*	*I-17*	*237, SE corner of NB Birdge over Moore's Gulch*	*Scour occurring along the abutment embankment of the corner of the bridge.*	**55.96**	**20**

CENTRAL DISTRICT (CD) RESULTS

The Central District submitted the fewest number of projects compared to the other ADOT Districts, but two of the three submitted projects scored in the Statewide Top 20 Projects scoring very high at 65.68 points and 62.17 points respectively.

These two projects ranked in the Statewide Top 20 Projects largely because these projects scored well in all of the top three weighted criteria, which include:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*;
- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.; and
- *Criterion 8: Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW*.

These three criteria have a weight of 13.21 points, 16.71 points, and 15.71 points significantly increasing their score among the other projects submitted. These two top scoring projects also both scored high in the Implementation Complexity category as they are both located with ADOT right-of-way and have the potential to leverage financial partnership.

Refer to **Table 10** on the following page for a summarized list of the Central District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 10: Central District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
CD	*CD - A*	*SR 347*	*SR 238 to GRIC Boundary*	*Erosion, bank protection and/or curb and gutter needed.*	**65.68**	**7**
CD	*CD - B*	*I-10*	*163.9 - Queen Creek TI*	*Unstable slopes, extreme rutting and pole foundations exposed.*	**32.97**	**45**
CD	*CD - C*	*SR 238*	*24.00 – 44.24*	*Highway experiences frequent flooding at low points, often causing roadway closures.*	**62.17**	**11**

SOUTHEAST DISTRICT (SED) RESULTS

The Southeast District submitted 10 total projects for consideration, with five of them making it into the Statewide Top 20 Projects. In fact, two of their projects scored the second and fourth highest scores across all other projects at 76.05 points and 68.09 points respectively. All the Southeast District's projects that ranked in the Statewide Top 20 Projects scored well in all three of the top three weighted criteria, which include:

- *Criterion 1: Project eliminates or reduces flooding or property damage of adjacent property*;
- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.; and
- *Criterion 8: Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW*.

These three criteria have a weight of 13.21 points, 16.71 points, and 15.71 points significantly increasing their score among the other projects submitted.

Another noteworthy observation is that all 10 of the projects submitted by the Southeast District are located and can be implemented completely within ADOT right-of-way reducing the complexity of implementation. Also, all 10 projects are all located in close proximity to Jurisdictional Water of the US yielding higher scores among all District projects as compared to some projects considered from other ADOT Districts.

Please refer to **Table 11** on the following page for a summarized list of the Southeast District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 11: Southeast District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
SED	*SED - A*	*US 60*	*229.2 to 229.45*	*Stormwater will not drain at bridge and overtops roadway resulting in erosion.*	**76.05**	**2**
SED	*SED - B*	*SR 288*	*289*	*Stormwater overtops roadway resulting in erosion.*	**43.13**	**35**
SED	*SED - C*	*US 70*	*380.46*	*Channel sedimentation, overtopping by railroad.*	**68.09**	**4**
SED	*SED - D*	*SR 186*	*343-350 & 358, Wilcox to Kansas Settlement*	*Low water crossings.*	**56.75**	**19**
SED	*SED - E*	*SR 181*	*51, 55 & 60*	*Low water crossings.*	**41.79**	**37**
SED	*SED - F*	*SR 266*	*210, Gillespie Wash*	*Outlet scour protection.*	**31.31**	**47**
SED	*SED - G*	*US 60*	*262-263*	*Embankment flumes scoured out needing reconstruction.*	**46.21**	**27**
SED	*SED - H*	*SR 177*	*166.7*	*Significant erosion on outlet side of 48-inch CMP.*	**37.89**	**42**
SED	*SED - I*	*SR 288*	*265.3*	*Culvert restoration of undersized aged structure.*	**62.00**	**12**
SED	*SED - J*	*SR 88*	*220.2 - 229.2*	*Culvert restoration.*	**61.17**	**14**

SOUTHCENTRAL DISTRICT (SCD) RESULTS

The Southcentral District submitted eight total projects with one of them scoring in the Statewide Top 20 Projects. Southcentral District's top scoring project scored significantly higher than the rest of the District's projects because it's the only project that scored in two of the top three weighted criterion, which include:

- *Criterion 2: The stormwater issue(s) cause roadway closures and/or restrictions*.; and
- *Criterion 8: Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW*.

These two criteria are weighted 16.71 points and 15.71 points respectively, significantly increasing the score of project SCD – G compared to the other seven projects. The other reason why SCD – G performed well is due to the fact that this project is identified as the District's second priority project and it located within close proximity to the Jurisdictional Water of the US, giving the project an additional 16 points compared to some of the other projects.

Refer to **Table 12** on the following page for a summarized list of the Southcentral District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 12: Southcentral District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
SCD	SCD - A	WB I-10-Frontage Rd. (Pomerene Rd & Ramsey Rd)	306 & 306.917 (Benson)	Sediment upstream and downstream needs to be removed. Standard maintenance equipment will not fit in the 5-foot high box culverts.	43.47	34
SCD	SCD - B	WB I-10	306.9 (Benson-San Pedro River Bridge)	Tanner Wash getting closer to US 89, potential for highway failure.	44.10	33
SCD	SCD - C	SB SR 80	306.079 (St David)	Wash on the north side of US 89A at MP 556 is within 5-feet of highway.	39.46	39
SCD	SCD - D	SR 386	306.079 4.37, 6.05, 6.58, 7.5, 11.1 - Three Points	Pipes are 15 to 20-feet below grade at inlet causing highway to act as dam.	35.07	43
SCD	SCD - E	EB/WB I-10, Marsh Station Rd., UPRR, Ramps	289.41-291.70 (Marsh Station)	Scour slopes eroding.	37.99	41
SCD	SCD - F	I-19	8.9-9.1 (Nogales)	Scour slopes eroding.	44.36	32
SCD	SCD - G	SR 286	24.957	Roadway overtopping and sever erosion on NB side due to undersized CMP pipes at wash location.	63.67	10
SCD	SCD - H	SR 286	10.6	Considerable shoulder erosion and lateral migration of channel on downstream side of SR 286 crossing	46.92	26

SOUTHWEST DISTRICT (SWD) RESULTS

The Southwest District submitted ten total projects and five of them scored in the Statewide Top 20 Statewide Projects. The Southwest District has the #1 and #3 overall ranked statewide projects at 83.88 points and 70.67 points respectively. Project (SWD -B) is the #1 ranked project statewide and scored high in all evaluation criteria while the District's second highest scoring project scored well in two of the three highest weighted evaluation criteria which is the main reason for the 13 point difference between the two highly ranked projects.

Refer to **Table 13** on the following page for a summarized list of the Southwest District projects and their corresponding results from the ADOT SWSWECS PPM, while **Appendix A** has the detailed breakdown for all evaluation criteria.

Table 13: Southwest District Results

Project Information					Top 20 Project	
District	Project ID	Route	MP	Issue	Sum	Rank
SWD	SWD - A	US 95 / SR 95	65.2, 66.5, 66.9, 69.3, 92.1, 92.5, 92.9, 110.8, & 112.5	Nine low water crossings causing pavement erosion.	70.67	3
SWD	SWD - B	US 95	54-56	Stormwater run-off eroding shoulders.	83.88	1
SWD	SWD - C	I-8	WB 117.95	Flowing through box culvert flooding residential property.	61.93	13
SWD	SWD - D	Pacific Ave	Ave 2E Underpass Structure #1381	Stormwater flows damaging residential subdivision.	57.35	18
SWD	SWD - E	US 95	Fortuna Wash	Stormwater flows erosion threatening flooding of adjacent properties.	48.38	24
SWD	SWD - F	US 95	69.83-70.04	Wash cutting into roadway during storm events causing pavement undermining.	67.59	6
SWD	SWD - G	I-10	31.5-32.5	Roadway overtopping occurs during large storm events.	30.57	48
SWD	SWD - H	SR 85	139.81-141.11	Water overtopping bank of the wash into the median eroding the roadway shoulders.	47.79	25
SWD	SWD - I	I-10	18.89	Flooding occurs in southeast quadrant of structure threatening mobile businesses.	51.54	23
SWD	SWD - J	I-10	WB 95.8-97.5	Agricultural run-off compromising pavement section.	44.79	31

V. TECHNICAL ADVISORY COMMITTEE MEETING #3 SUMMARY

In preparation of TAC Meeting #3, the Project Team distributed the PPM findings and summary to the TAC for their review and comment on April 6, 2020. The Project Team received two email comments from TAC members.

While general observations and comments from the TAC suggested that they were satisfied with the overall Statewide Top 20 project rankings, the two comments were similar in nature, as they had hoped that Criteria #9 – "project is defined by the ADOT District as a priority" would have carried a higher weight. It was explained that the weighting of each of the criteria was the result of an averaging of all District survey inputs and that a few of the inputs assigned lower weights to Criteria #9. As a result (and as explained above), the Northcentral and Northeast Districts had projects rank high in the Statewide Top 20 that were, in a couple of isolated cases, not considered higher ranked as their own District priority.

On April 27, 2020, TAC Meeting #3 was conducted virtually to review the PPM results and final evaluation criteria/weighting and review a District-by-District summary of the PPM results and Statewide Top 20 Projects. The objectives of TAC Meeting #3 were to:

1. Obtain TAC comments on the Statewide Top 20 project results and application of evaluation criteria.
2. Obtain TAC concurrence on prioritization model results and Statewide Top 20 projects.
3. Identify follow up items, especially pertaining to any new information impacting top 20 projects moving forward.

The Project Team presented a summary of the findings District-by-District and after a brief discussion, the TAC offered concurrence with the findings and did not express any additional concerns with the application of the evaluation criteria nor the results of the Statewide Top 20 projects identified to carry forward to the next step of the process.

The Project Team also explained that the Southcentral District had provided a newly introduced project that would be included into a final run of the prioritization model.

The meeting concluded with a review of the project next steps that included:

1. Receive any final comments from the District's on TAC Meeting #3 results.
2. Consultant to prepare a brief Working Paper #2 describing project prioritization process and results.
3. TAC to review and comment on Working Paper #2.
4. Consultant will prepare scoping elements and planning level cost estimates for the Statewide Top 20 projects (Working Paper #3). This will include follow up conversations/coordination with District's on scoping elements.
5. Distribution of Working Paper #3 for TAC review and comment.
6. Consultant preparation of Working Paper #4 – project overview and implementation guidance.

VI. APPENDIX A: DETAILED PROJECT PRIORITIZATION MODEL RESULTS

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Northeast District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits						Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12	
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.	
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score
District	Project ID	Route	MP																								
NED	NED - A	US 191	389.3	N	0	Y	16.71	0.067572	6.75	>.25 mi, 32.716038	0	No	0	No	6	21.3	5.25	Roadway Drainage Conveyance	15.71	2	9.25	No	0	Easement	0	No/Unknown	0
NED	NED - B	US 160	420	N	0	N	0	0.002152	6.75	>.25 mi, 76.515546	0	No	0	Yes	6	10.4	3.50	Roadway	15.71	1	9.25	No	0	Easement	0	Army Corp of Engineers-permitting	3.75
NED	NED - C	US 160	380.7-363.6	N	0	N	0	0.051377	6.75	>.25 mi, 44.88345	0	No	0	Yes	6	10.7	3.50	Roadway Sideslopes	15.71	3	9.25	No	0	Easement	0	No/Unknown	0
NED	NED - D	SR 264	447.3	Y	13.21	N	0	0.538532	6.75	>.25 mi, 52.195729	0	No	0	No	0	9.6	1.75	Drainage Conveyance	5.24	4	6.17	No	0	Easement	0	No/Unknown	0
NED	NED - E	SR 73	313	N	0	N	0	1.879178	0	>.25 mi, 18.883173	0	No	0	No	0	22.4	5.25	Roadway Sideslopes Drainage Conveyence	15.71	5	6.17	No	0	Easement	0	No/Unknown	0
NED	NED - F	US 180	415.6-415.7	N	0	Y	16.71	0.303554	6.75	>.25 mi, 6.195787	0	Yes	5.25	No	0	13.2	3.50	Roadway Drainage conveyance	15.71	6	6.17	No	0	Easement	0	No/Unknown	0
NED	NED - G	US 160	373.3, 396	N	0	Y	16.71	1.984383	0	>.25 mi, 56.380869 ; >.25 mi, 43.608215	0	No	0	Yes	6	10.5	3.50	Roadway Drainage conveyance	15.71	7	0.00	No	0	Easement	0	Black Mesa & Lake Powell Railroad	3.75
NED	NED - H	US191	472	N	0	N	0	1.380968	0	>.25 mi, 95.33859	0	No	0	No	0	12	3.50	Sideslope	10.47	8	0.00	No	0	Easement	0	No/Unknown	0
NED	NED - I	SR 264	417+/-	N	0	N	0	1.444604	0	>.25 mi, 55.044051	0	No	0	No	0	13.5	3.50	Sideslope	10.47	9	0.00	No	0	Easement	0	No/Unknown	0
NED	NED - J	I-40	287 EB	N, possibly City of Holbrook	0	Y	16.71	1.097827	0	>.25 mi, 9.336357	0	No	0	Yes	6	42.6	5.25	Roadway Drainage conveyance	15.71	10	0.00	Yes	6.25	ROW	4.75	City of Holbrook	3.75
NED	NED - K	SR 377	8,13,24	N	0	Y	16.71	0.127977	6.75	>.25 mi, 11.78828	0	No	0	Yes	6	13.3	3.50	Roadway Drainage conveyance	15.71	11	0.00	Yes	6.25	ROW	4.75	No/Unknown	0

#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Sum	Rank
59.67	15.5
44.96	29
41.21	37.5
33.11	44
27.13	50
54.09	21
45.67	28
13.97	51.5
13.97	51.5
58.42	17
59.67	15.5

Northcentral District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits						Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12	
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.	
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score
District	Project ID	Route	MP																								
NCD	NCD - B	US 89	506.3 & 507.3 (Tanner Wash)	N	0	N	0	0.019401	6.75	>.25 mi, 30.239977	0	No	0	Yes	6	15.1	5.25	Roadway Sideslopes	15.71	1	9.25	No	0	Easement	0	No/Unknown	0
NCD	NCD - C	US 89A	556	N	0	N	0	0.53573	6.75	>.25 mi, 19.516837	0	No	0	No	0	17	3.50	Roadway Sideslopes	15.71	3	9.25	No	0	Easement	0	BLM	3.75
NCD	NCD - D	SR 98	299	N	0	N	0	1.98127	0	>.25 mi, 2.537466	0	No	0	No	0	6.4	1.75	Roadway Sideslopes	15.71	5	6.17	No	0	Easement	0	Lachee Waste Water Treatment Plant (Source of damage), SRP Navajo Generating Station	3.75
NCD	NCD - E	SR 87	239.5 (Hog Wash)	N	0	N	0	0.023025	6.75	>.25 mi, 3.918289	0	No	0	Yes	6	14.2	3.50	Drainage conveyence	5.24	4	6.17	No	0	ROW	4.75	No/Unknown	0
NCD	NCD - F	US 160	322-325 (Tuba City)	Y	13.21	Y	16.71	1.052029	0	>.25 mi, 49.867534	0	No	0	Yes	6	10.2	3.50	Roadway	15.71	6	6.17	No	0	Easement	0	Tuba City	3.75
NCD	NCD - G	US 160	356	Y	13.21	Y	16.71	0.90913	6.75	>.25 mi, 37.994034	0	No	0	Yes	6	12.5	3.50	Roadway	15.71	7	0.00	No	0	Easement	0	Black Mesa & Lake Powell Railroad	3.75

#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Sum	Rank
42.96	35
38.96	40
27.38	49
32.40	46
65.05	9
65.63	8

Northwest District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits								Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12			
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.			
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Sum	Rank
NWD	NWD - A	I-40	144.0 WB	N	0	Y	16.71	1.24906	0	>.25 mi, 34.939794	0	No	0	Yes	6	36.8	5.25	Roadway Sideslope	15.71	3	9.25	Yes	6.25	ROW	4.75	BNSF;adjacent owner	3.75	67.67	5
NWD	NWD - B	SR 95	165.3 - 165.4 SB/NB	N	0	N	0	0.732577	6.75	>.25 mi, 11.294511	0	No	0	Yes	6	11.8	3.50	Roadway Drianage Basin	15.71	2	9.25	No	0	Easement	0	No	0	41.21	37.5
NWD	NWD - C	US 93	157.6 SB, Cotton Wood Canyon	N	0	N	0	0.069093	6.75	>.25 mi, 14.068391	0	No	0	Yes	6	23.9	5.25	Roadway Sideslopes	15.71	1	9.25	Yes	6.25	ROW	4.75	No	0	53.96	22
NWD	NWD - D	I-17	237, SE corner of NB Birdge over Moore's Gulch	N	0	N	0	0.0961618	6.75	>.25 mi, 5.265842	0	No	0	Yes	6	13.4	3.50	Roadway Sideslope	15.71	4	9.25	Yes	6.25	ROW	4.75	BLM	3.75	55.96	20

#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Central District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits								Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12			
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.			
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Sum	Rank
CD	CD - A	SR 347	SR 238 to GRIC Boundary	N	0	Y	16.71	0.356575	6.75	>.25 mi, 33.893346	0	No	0	Yes	6	9	1.75	Sideslopes	10.47	2	9.25	Yes	6.25	ROW	4.75	City of Maricopa, GRIC	3.75	65.68	7
CD	CD - B	I-10	163.9 - Queen Creek TI	N	0	N	0	2.004984	0	>.25 mi, 34.37862	0	No	0	Yes	6	12.7	3.50	Sideslopes	10.47	3	9.25	No	0	Easement	0	GRIC	3.75	32.97	45
CD	CD - C	SR 238	24.00 – 44.24	N	0	Y	16.71	0.060553	6.75	>.25 mi, 23.406194	0	No	0	No	0	18.6	5.25	Roadway	15.71	1	9.25	No	0	ROW	4.75	UPRR, City of Maricopa, Marciopa County, Pinal County, GRIC, Ak-Chin Indian Community	3.75	62.17	10

#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Southeast District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits						Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12	
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.		
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Sum	Rank
District	Project ID	Route	MP																										
SED	SED - A	US 60	229.2 to 229.45	N	0	Y	16.71	0.031165	6.75	<.25 mi, 0.031165	7.13	No	0	Y	6	14	3.50	Roadway Side slopes	15.71	1	9.25	Yes	6.25	ROW	4.75	No	0	76.05	2
SED	SED - B	SR 288	289	N	0	N	0	0.259539	6.75	>.25 mi, 15.219602	0	No	0	N	0	12	3.50	Roadway Side slopes	15.71	5	6.17	Yes	6.25	ROW	4.75	No	0	43.13	34
SED	SED - C	US 70	380.46	Y	13.21	Y	16.71	0.037141	6.75	>.25 mi, 0.453506	0	Yes	5.25	N	0	16	5.25	None	0.00	4	6.17	Yes	6.25	ROW	4.75	Eastern AZ RR	3.75	68.09	4
SED	SED - D	SR 186	343-350 & 358, Wilcox to Kansas Settlement	N	0	Y	16.71	0.69661	6.75	>.25 mi, 41.288873 ; >.25 mi, 45.927402	0	No	0	N	0	14.3	3.50	Roadway Side slopes	15.71	8	3.08	Yes	6.25	ROW	4.75	No	0	56.75	19
SED	SED - E	SR 181	51, 55 & 60	N	0	N	0	0.004621	6.75	>.25 mi, 42.049197	0	No	0	N	0	22.9	5.25	Roadway Side slopes	15.71	9	3.08	Yes	6.25	ROW	4.75	No	0	41.79	36
SED	SED - F	SR 266	210, Gillespie Wash	N	0	N	0	0.007368	6.75	>.25 mi, 24.430095	0	No	0	N	0	N/A	0.00	Sideslopes	10.47	10	3.08	Yes	6.25	ROW	4.75	No	0	31.31	47
SED	SED - G	US 60	262-263	N	0	N	0	0.572764	6.75	>.25 mi, 14.292765	0	No	0	N	0	11.5	3.50	Roadway Side slopes Drainage Conveyence	15.71	3	9.25	Yes	6.25	ROW	4.75	No	0	46.21	27
SED	SED - H	SR 177	166.7	N	0	N	0	0.030864	6.75	>.25 mi, 0.925003	0	No	0	N	0	14.2	3.50	Sideslopes	10.47	6	6.17	Yes	6.25	ROW	4.75	No	0	37.89	42
SED	SED - I	SR 288	265.3	N	0	Y	16.71	0.055784	6.75	>.25 mi, 0.363126	0	Yes	5.25	N	0	12	3.50	Roadway Sideslopes	15.71	7	3.08	Yes	6.25	ROW	4.75	No	0	62.00	11
SED	SED - J	SR 88	220.2 - 229.2	N	0	Y	16.71	0.010198	6.75	>.25 mi, 1.103794	0	No	0	N	0	6.3	1.75	Roadway Side slopes Drainage Conveyence	15.71	2	9.25	Yes	6.25	ROW	4.75	No	0	61.17	13

#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Southcentral District Detailed Results

				Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits						Implementation Complexity					
				1		2		3		4		5		6		7		8		9		10		11		12	
				Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.		
Project Information				Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Sum	Rank
District	Project ID	Route	MP																										
SCD	SCD - A	WB I-10- Frontage Rd. (Pomerene Rd & Ramsey Rd)	306 & 306.917 (Benson)	N	0	N	0	0.021647	6.75	>.25 mi, 4.355522	0	No	0	Y	6	N/A	0.00	Drainage conveyence	10.47	4	9.25	Yes	6.25	ROW	4.75	No	0	43.47	33
SCD	SCD - B	WB I-10	306.9 (Benson-San Pedro River Bridge)	N	0	N	0	0.007757	6.75	>.25 mi, 4.712769	0	No	0	Y	6	36.6	5.25	Sideslope	10.47	5	4.63	Yes	6.25	ROW	4.75	No	0	44.10	32
SCD	SCD - C	SB SR 80	306.079 (St David)	N	0	N	0	1.157216	0	>.25 mi, 1.814357	0	No	0	N	0	14.2	3.50	Sideslope	15.71	3	9.25	Yes	6.25	ROW	4.75	No	0	39.46	39
SCD	SCD - D	SR 386	306.079 4.37, 6.05, 6.58, 7.5, 11.1 - Three Points	N	0	Y	16.71	0.130068	6.75	>.25 mi, 36.775173	0	No	0	N	0	8.8	1.75	Roadway Sideslopes Drainage conveyence	5.24	7	4.63	No	0	Easement	0	No	0	35.07	43
SCD	SCD - E	EB/WB I-10, Marsh Station Rd., UPRR, Ramps	289.41-291.70 (Marsh Station)	N	0.00	N	0.00	0.097126	6.75	>.25 mi, 17.635848	0.00	No	0.00	Y	6.00	30	5.25	Sideslopes	5.24	8	0.00	Yes	6.25	ROW	4.75	UPRR	3.75	37.99	41
SCD	SCD - F	I-19	8.9-9.1 (Nogales)	N	0	N	0	0.508964	6.75	>.25 mi, 1.249597	0	No	0	Y	6	7.2	1.76	Sideslopes	10.47	6	4.63	Yes	6.25	ROW	4.75	Santa Cruz County	3.75	44.36	31
SCD	SCD - G	SR 286	24.957	N	0	Yes	16.71	0.006316	6.75	22.299846	0	No	0	No	0	19.9	5.25	Roadway Sideslopes	15.71	2	9.25	Yes	6.25	Easement	0	No	0	59.92	14
SCD	SCD - H	SR 286	10.6	N	0	Y	16.71	1.192953	0	16.437124	0	No	0	No	0	19.6	5.25	Roadway Sideslopes Drainage Conveyance	15.71	1	9.25	No	0	Easement	0	No	0	46.92	26

Southwest District Detailed Results

						Protect Public Health/Safety of Adjacent				Environmental Benefits/ Regulatory Mandates						Economic/ Operational/ Asset Management Benefits						Implementation Complexity					
						1		2		3		4		5		6		7		8		9		10		11		12	
						Project eliminates or reduces flooding or property damage of adjacent property.		The stormwater issue(s) cause roadway closures and/or restrictions..		Existing condition is located in proximity to Jurisdictional Water of the US (WOTUS).		Existing condition is located in proximity to Impaired and/or Outstanding Arizona Waters.		Project location has a TMDL already in place.		Is the project location located on an ADOT corridor of strategic significance as defined by a completed Corridor Profile Study?		Percentage of freight flow movement (T-Factor) reported on the ADOT corridor? *		Project would eliminate the negative impact to the structural integrity of existing ADOT assets in the ROW.		Project is identified by the ADOT District as a priority.		Project can be completed entirely within the existing ADOT ROW.		Project is located within ADOT ROW or an easement upon public lands.		Opportunity to leverage financial partner participation.	
Project Information						Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score	Result	Score
District	Project ID	Route	MP	Issue	Project Type																								
SWD	SWD - A	US 95 / SR 95	65.2, 66.5, 66.9, 69.3, 92.1, 92.5, 92.9, 110.8, & 112.5	Nine low water crossings causing pavement erosion.	Construction	N	0	Y	16.71	0.406967	6.75	>.25 mi, 32.173704 ; >.25 mi, 34.333588 ; >.25 mi, 36.125354 ; >.25 mi, 54.383958 ; >.25 mi, 40.035849	0	No	0	Yes	6	22.3	5.25	Roadway Drainage Conveynce	15.71	1	9.25	Yes	6.25	ROW	4.75	No	0
SWD	SWD - B	US 95	54-56	Stormwater run-off eroding shoulders.	Construction	Y	13.21	Y	16.71	0.02165	6.75	>.25 mi, 24.002241	0	No	0	Yes	6	26.5	5.25	Roadway Sideslopes Drainage Conveynce	15.71	2	9.25	Yes	6.25	ROW	4.75	No	0
SWD	SWD - C	I-8	WB 117.95	Flowing through box culvert flooding residential property.	Construction	Y	13.21	N	0	0.449959	6.75	>.25 mi, 21.348218	0	No	0	Yes	6	26.8	5.25	Sideslopes	10.47	3	9.25	Yes	6.25	ROW	4.75	No	0
SWD	SWD - D	Pacific Ave	Ave 2E Underpass Structure #1381	Stormwater flows damaging residential subdivision.	Construction	Y	13.21	N	0	0.331041	6.75	>.25 mi, 2.82549	0	No	0	Yes	6	N/A	0.00	Sideslopes	10.47	4	6.17	Yes	6.25	ROW	4.75	City of Yuma	3.75
SWD	SWD - E	US 95	Fortuna Wash	Stormwater flows erosion threatening flooding of adjacent properties.	Construction	Y	13.21	N	0	0.027682	6.75	>.25 mi, 10.91026	0	No	0	Yes	6	22.9	5.25	None	0.00	5	6.17	Yes	6.25	ROW	4.75	No/ASLD	0
SWD	SWD - F	US 95	69.83-70.04	Wash cutting into roadway during storm events causing pavement undermining.	Construction	N	0	Y	16.71	0.062545	6.75	>.25 mi, 36.762624	0	No	0	Yes	6	26.5	5.25	Roadway Sideslopes	15.71	6	6.17	Yes	6.25	ROW	4.75	No	0
SWD	SWD - G	I-10	31.5-32.5	Roadway overtopping occurs during large storm events.	Construction	N	0	N	0	2.579191	0	>.25 mi, 41.247334	0	No	0	Yes	6	41.7	5.25	Drainage Conveynce	5.24	7	3.08	Yes	6.25	ROW	4.75	No	0
SWD	SWD - H	SR 85	139.81-141.11	Water overtopping bank of the wash into the median eroding the roadway shoulders.	Construction	N	0	N	0	0.016089	6.75	>.25 mi, 6.241138	0	No	0	Yes	6	23.5	5.25	Roadway Sideslopes	15.71	8	3.08	Yes	6.25	ROW	4.75	No	0
SWD	SWD - I	I-10	18.89	Flooding occurs in southeast quadrant of structure threatening mobile businesses.	Construction	N	0	N	0	0.131037	6.75	>.25 mi, 44.599253	0	No	0	Yes	6	44.8	5.25	Roadway Sideslopes	15.71	9	3.08	Yes	6.25	ROW	4.75	Town of Quartzite/ private property	3.75
SWD	SWD - J	I-10	WB 95.8-97.5	Agricultural run-off compromising pavement section.	Construction	N	0	N	0	1.311876	0	>.25 mi, 13.118574	0	No	0	Yes	6	34.6	5.25	Roadway Sideslopes	15.71	10	3.08	Yes	6.25	ROW	4.75	Adjacent property owner	3.75

Top 20 Project
#1 Scoring Methodology
Positive Impact - Full Weighted Points
Positive Impact Partial Weighted Point (as needed)
Neutral Impact - No Points

Sum	Rank
70.67	3
83.88	1
61.93	13
57.35	18
48.38	24
67.59	6
30.57	48
47.79	25
51.54	23
44.79	31