



C3 FLOOD HAZARD MITIGATION PARTNERING
Final Report of Team Recommendations

Tim Phillips, Flood Control District
Chief Engineer & General Manager

Lisa Amos, Maricopa County Public Works Real Estate
Maricopa County Government Task Force

Laynie Bell, Maricopa County Public Works Real Estate
Maricopa County Government Task Force

Dave Degerness, Flood Control District
Regional Partners Task Force

Christopher Fazio, Flood Control District
Team Leader, Current Environment Task Force Leader, Evaluation Committee Member

Cade Furnas, Flood Control District
Current Environment Research

Christine Jasinski, Flood Control District
Logistics, Current Environment Task Force, Evaluation Committee Member

Denise Lacey, Maricopa County Department of Transportation
City Planning Task Force Co-Leader, Evaluation Committee Member

Holli Lawton, Maricopa County Public Works Real Estate
Development Community Task Force

Sylvia Lopez, Flood Control District
Initial Team Leader

Mark Modin, Maricopa County Department of Transportation
City Engineering Task Force Co-Leader, Evaluation Committee Member

Matt Oller, Flood Control District
Education & Technology Task Force Leader

Theresa Pinto, Flood Control District
Regional Partners Task Force

Linda Reinbold, Flood Control District
City Engineering Task Force

Don Rerick, Flood Control District
City Engineering Task Force Leader, Evaluation Committee Member

Samantha Samples, Flood Control District
Current Environment Research, City Planning Task Force

Patrick Schafer, Flood Control District
Data Compilation, Current Environment Task Force, Evaluation Committee Member

Gary Scott, Maricopa County Public Works Real Estate
Development Community Task Force Leader, Evaluation Committee Member

Gant Wegner, Flood Control District
Communications, Current Environment Task Force, Evaluation Committee Member

Scott Vogel, Flood Control District
Regional Partners Task Force Leader, Evaluation Committee Member

Doug Williams, Flood Control District
City Planning Task Force Leader, Evaluation Committee Member

Mike Wilson, Maricopa County Public Works Real Estate
Maricopa County Government Task Force Leader, Evaluation Committee Member

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INTRODUCTION & RESULTS SUMMARY

PURPOSE

The Coordinated, Comprehensive, Collaborative Flood Hazard Mitigation Partnering (C3 FHMP) effort addressed Strategic Initiative No.3 of the Flood Control District of Maricopa County (District) 2009 Comprehensive Plan: Increase Collaboration and Partnerships.

GOAL

The District initiated the C3 FHMP process to determine how the funding and resources of other entities could be best applied to mitigate flood hazards in Maricopa County, or where mutual benefits would be realized, and to develop an implementation plan to execute team recommendations.

SCOPE

The C3 FHMP scope included partnerships: (1) with government agencies and non-contract private interests; (2) formal or informal in nature; (3) financial or non-financial (collaborative) in nature; (4) increasing District efficiency or effectiveness; and (5) pertaining to both capital projects and flood control operations.

SUMMARY OF EFFORTS AND CONCLUSIONS

After an extensive shaping and scoping phase, C3 FHMP reviewed the District's current partnering environment (baseline condition), interviewing District staff and collecting data on current and past District agreements. The C3 FHMP team polled staff regarding weaknesses as well as opportunities for new partnerships. Taking this input, the C3 FHMP team formulated an external data collection approach, identifying stakeholder agencies (representative current and potential partners), identifying potential partnerships for purposes of prompting, and identifying critical questions to detect strengths, weaknesses and opportunities perceived externally. The team reviewed internal and external data and enumerated 50 potential partnerships identified by interviewees. Evaluation by team members under six evaluation criteria assessed whether each listed partnership would provide a net benefit to the District. Four partnerships evaluated as net detriments were identified as unsuitable. The 46 remaining partnerships were assessed as either "recommended" or "conditionally recommended." Due to staff limitations, 13 of the 46 were selected by the C3 FHMP team and District management for deliberate action, with the remaining recommendations to be implemented in the future subject to staff availability. The order of these 13 is not reflective of priority among them:

1. Emphasize partnerships with city planning departments for joint adoption of, and coordination on, District Area Drainage Master Studies/Plans (ADMS/Ps) to increase developer implementation.
2. Develop partnerships with Maricopa County Planning & Development for joint adoption of, and coordination on, District ADMS/Ps to increase developer implementation.
3. Emphasize partnerships with Maricopa County Department of Transportation (MCDOT) for coordination on District ADMS/Ps and MCDOT planning to increase alignment of the District's Capital Improvement Program and MCDOT's Transportation Improvement Program.
4. Develop partnerships with the federal Natural Resources Conservation Service (NRCS) for joint development, funding and/or implementation of District ADMS/Ps to obtain federal funding.
5. Emphasize partnerships with cities for small projects by increasing small project program capacity to better address local flooding hazards.
6. Emphasize partnerships with cities for regional projects by increasing consideration for in-kind cost share contributions.
7. Emphasize partnerships with cities for regional projects by increasing District cost share to better address regional flooding hazards.
8. Emphasize partnerships with cities and other agencies for distribution of ALERT system data (weather, rainfall and flood warning information) to increase ALERT system effectiveness.
9. Develop partnership with cities for periodic countywide flood control meetings to increase countywide flood control technical expertise and coordination.

10. Develop partnerships with other agencies for GIS data-sharing to increase data availability and operational efficiency.
11. Emphasize partnerships with cities for Operations & Maintenance (O&M) field cross-training to increase efficiency and ensure standards are met.
12. Develop partnerships with cities for District inheritance of O&M responsibilities on major new regional structures, where appropriate, to ensure standards are met.
13. Develop partnership with cities and other agencies to include links on the District public web site to other-agency flood control contract advertisements to increase bid competition.

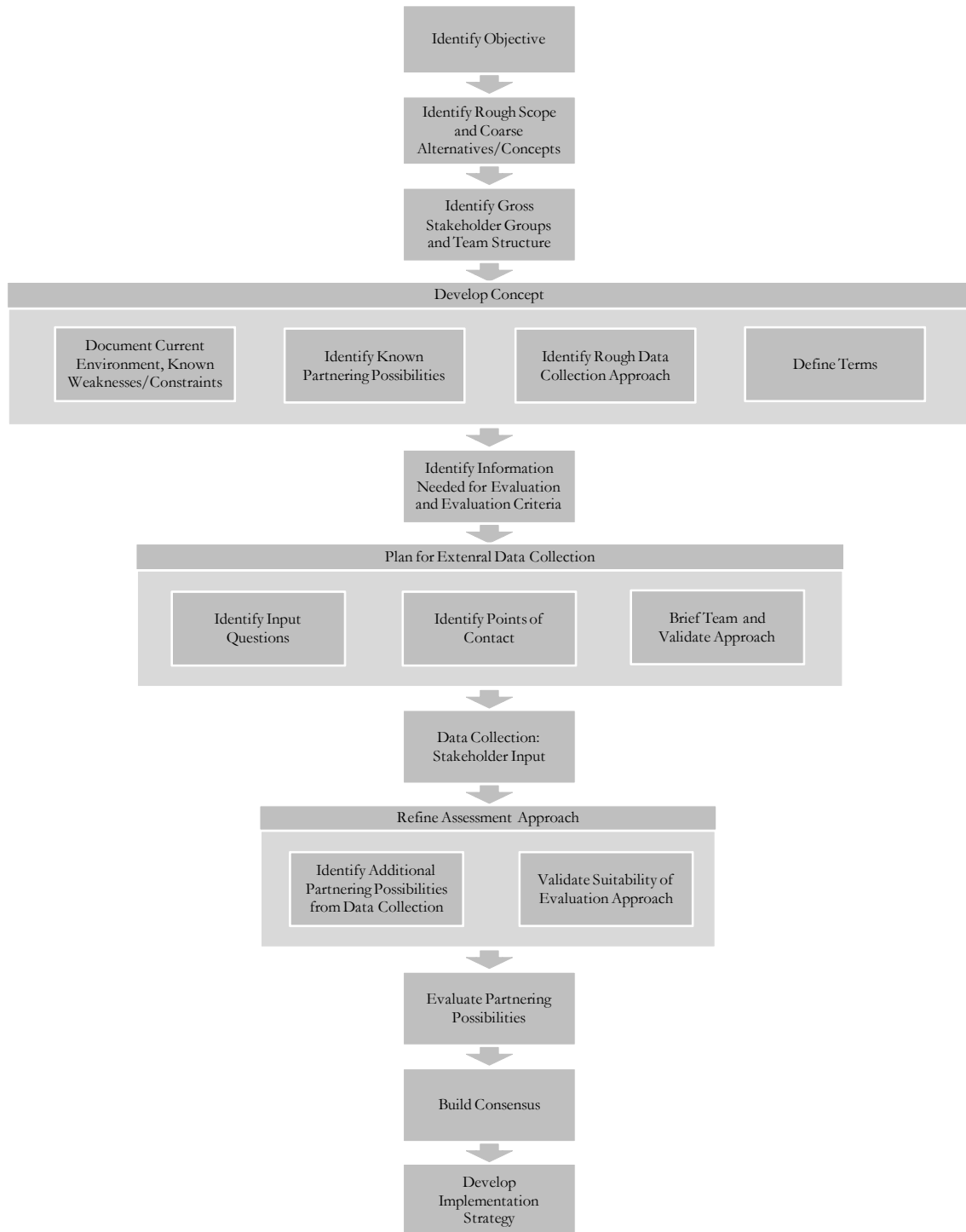
This report provides amplifying information regarding the C3 FHMP process, resultant recommendations, and a plan for implementing those recommendations.



I. PROCESS OVERVIEW

PROCESS OVERVIEW DIAGRAM

The C3 FHMP process is depicted graphically below, followed by a narrative process description.



NARRATIVE PROCESS OVERVIEW

The C3 FHMP process is generally described below. Outcomes of the process and its steps are described in subsequent sections of this report; as such, they are not fully described in this section.

1. Identify objective.

Strategic Initiative No.3 identified the broad objective of C3 FHMP: increase collaboration and partnerships. However, recognizing that partnerships themselves were not the end goal, the scope was narrowed somewhat.

The District's primary interest related to Strategic Initiative No.3 during formation of the 2009 Comprehensive Plan was reducing its cost and/or increasing its revenue. During shaping of the C3 FHMP process, this objective expanded to include partnerships achieving mutual goals, with an emphasis on increasing efficiency or effectiveness; and the goal narrowed as the team recognized the need to distinguish between a goal of increasing partnerships and a goal of increasing partnerships that merit District involvement. In other words, the C3 FHMP goal would not be finding partnerships for the sake of finding partnerships; it would be finding partnerships that would each yield a net benefit with respect to the District's mission and objectives.

Initial meetings identified the desired C3 FHMP output as: (1) a list of partnerships meriting District involvement; (2) prioritization of recommended partnerships; and (3) a broad implementation plan.

The final objective was narrowed to the following: "Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County, or where mutual benefits may be realized, and develop an implementation plan to execute team recommendations."

2. Identify rough scope and coarse alternatives/objectives.

A shaping process identified partnerships that would be evaluated under the C3 FHMP exercise. Partnerships with consultant or contractors were deemed beyond the scope of the exercise; all other partnerships were considered within the scope. Initially, partnerships were envisioned as between the District and city staffs, neighboring counties, neighboring Indian communities, relevant state agencies, relevant Maricopa County agencies, and relevant federal agencies. This stakeholder list expanded following the concept development phase (see part 4 of the process). Initial meetings unveiled the potential for the stakeholder list to expand dramatically, to the point of paralyzing the data collection process. The C3 FHMP team elected not to proactively collect data on limited-scale partnerships (e.g., partnerships with individual schools, commercial developments, churches, hospitals or similar entities for joint-use facilities). The team assumed that individual limited-scale partnership opportunities would be identified and explored as appropriate during the routine course of District planning efforts. The C3 FHMP effort instead was envisioned as broadly identifying potential partnerships, with an implementation plan to ensure specific partnerships would result.

Coarse (sample) alternatives were identified to provide team members with a conceptual framework and to ensure that data collection efforts were formulated in a manner to adequately capture alternatives for evaluation. The following coarse alternatives were identified, but were not intended to be an exhaustive list of potential alternatives:

- Implementing development infrastructure through special tax districts or development fees.
- Modifying District cost-share practices.
- Collaborating with other agencies to increase efficiencies in outreach efforts.
- Incorporating school districts in District planning efforts to identify hazard mitigation partnership opportunities (e.g., multiuse land acquisitions).
- Modifying District approaches to partnerships with federal agencies.
- Creating additional synergy between District planning efforts and municipal planning efforts.
- Hosting routine workgroups for flood control information sharing among municipalities.
- Systematically pursuing Indian gaming grants.

3. Identify gross stakeholder groups and team structure.

The general C3 model involved a team leader, a chief of staff, a data analyst/logistics coordinator, a communications coordinator, a current environment task force, and external stakeholder task forces. Initially, the following stakeholder groups were identified:

- Regional Partners
- City Engineering
- City Planning
- Maricopa County Departments
- Developers

This stakeholder list expanded following the concept development phase (see part 4 of the process).

The C3 FHMP structure departed from the general C3 model. The data analyst/logistics coordinator roles were separated to increase the effectiveness of each function. The C3 FHMP team identified a need to conduct the current environment assessment as a precursor to external data collection, so that the resulting assessment would provide a framework for the external data collection effort; as such, the need for a current environment task force was eliminated. In lieu of this task force, the chief of staff, data analyst, logistics coordinator and communications coordinator were tasked with conducting the current environment assessment. This approach provided an added benefit, ensuring that those individuals were directly exposed to the C3 FHMP concepts and better capable of providing informed evaluation input at the conclusion of the effort.

4. Develop concept.

The C3 FHMP team developed the rough C3 FHMP outline after developing an understanding of the baseline District partnership environment and identifying known partnership possibilities.

Section III of this report provides the resultant current environment and known partnering possibility documentation.

A. Document current environment.

The C3 FHMP team documented the District's current (or baseline) partnering environment through a review of existing intergovernmental agreements and through staff interviews and surveys. Given the C3 FHMP goal of identifying new partnerships, this would shape potential alternatives. If a partnership identified by a stakeholder were already in place, options would be limited to modifying District policies or practices with respect to that partnership, emphasizing the partnership, or deemphasizing the partnership. If a partnership identified by a stakeholder were *not* in place, options would be to pursue that partnership, or to deem the partnership inappropriate for the District.

Additionally, staff members were asked to identify perceived weaknesses associated with existing District practices and perceived constraints.

B. Identify known partnering possibilities.

Staff interviews and surveys requested staff input on known partnering possibilities. This data assisted in refinement of the external stakeholder list: agencies that were the subject of known possibilities were to be deliberately included in external data collection to the extent possible. Additionally, the data was intended to provide a list of prompts for C3 FHMP team members contacting external agencies.

C. Identify rough external data collection approach.

Documentation of the current environment and known partnering possibilities validated the appropriateness of the stakeholder groups originally identified. District staff responses to surveys and interviews highlighted the potential for partnerships with universities, schools and professional organizations as well.

The stakeholder list was expanded to include an Education & Technology segment.

As many staff perceived weaknesses and constraints pertained to District policies and practices, internal data collection additionally emphasized the importance of identifying external stakeholders' assessment of District practices.

C3 FHMP identified the following components of the external data collection exercise:

- Baseline assessment. Given District staff members' identification of perceived weaknesses, respondents would be asked to directly assess the value of their existing partnerships with the District.
- Opportunity assessment. Given District staff members' identification of perceived opportunities, respondents would be asked to directly assess the potential value of new partnerships with the District. The team recognized that potential partners would need to see benefit in a partnership for it to advance, just as the District would.
- Resource assessment. To give the District an understanding of the value of its non-financial resources, respondents would be directly asked to identify District resources valuable to them.
- Public-private partnership input. With a variety of mechanisms identified to effect public-private partnerships, external data collection would be relied upon to gather cities and developers input on acceptable and preferred mechanisms.
- Identification of opportunities. Stakeholders would be asked to identify partnership opportunities of value to them. This list of opportunities would be merged with District staff-identified opportunities.

Two distinct data collection approaches were developed:

- City data collection by survey following a working group session. Given the volume of District-City partnerships, the C3 FHMP team was particularly concerned with gathering well-thought input from city partners. This approach was intended to mitigate the potential for respondents to shape their input without sufficient consideration or based on isolated incidents. With a potential for disconnects between city engineers and city planners, the team elected to merge the engineering and planning teams' working groups. Attendees were to be provided individual surveys to complete after absorbing the working group discussion.
- Personal contact with remaining groups through phone or in-person interviews. As many contacts would be unfamiliar with the District or all of its programs, personal interviews were seen as critical, giving interviewers an opportunity to educate stakeholders on District programs and known potential partnership opportunities.

D. Define terms.

Terms related to public-private partnerships required definition and additional research, as differences between mechanisms for these partnerships were not familiar to District staff. Research was conducted related to flood tax zones, impact fees, community facilities districts and other special taxing districts.

5. Identify information needed for evaluation and evaluation criteria.

To ensure the external data collection exercise gathered all information necessary to assess potential partnerships, the evaluation approach was developed in advance. The resultant evaluation matrix is fully described in Section V of this report.

Generally, the team sought to establish a clear distinction between partnerships beneficial to the District and partnerships detrimental to the District. Under a simplified example, a partnership may involve higher District cost to provide additional flood protection; at some point, the detriment of the additional cost would outweigh the benefit of the increased flood protection. While it was anticipated that many identified partnerships would yield a net benefit to the District, the team wished to ensure detrimental partnerships were clearly identified as such and removed from further consideration.

6. Plan for external data collection.

A. Identify input questions.

Common questions were first formulated for use among all stakeholder task forces. Where common data would be sought, these questions were made parallel to ensure results could be pooled and results compared. Individual stakeholder groups then formulated questions uniquely relevant to their stakeholder groups. The C3 FHMP team aimed to gather the perspective of city engineers, for instance, related to the District's cost share practices, but had no need to gather such input from school districts.

B. Identify points of contact.

Task forces gathering the input of city engineers, city planners and Maricopa County departments had fixed points of contact. Those gathering the input of regional partners, the development community and the education and technology community had a more vague starting point. Taking into account the results of the concept development stage, those task forces sought to first identify subsets, and then to identify representative individual agencies, then to identify most suitable individual contacts.

C. Brief team and validate approach.

Following concept and data collection approach development, an internal progress review meeting was held for the C3 FHMP team and interested District staff to provide final input prior to external data collection. The meeting validated the planned approach.

7. Data collection: stakeholder input.

The external data collection exercise is fully described in Section IV of this report.

Task force leaders initiated contact with external stakeholders following an introductory email sent by the Chief Engineer. Data collection required approximately one month, with task force leaders providing interview responses as an output.

8. Refine assessment approach.

A. Identify additional partnering possibilities from data collection.

Responses to assessment-type questions were pooled, and data was summarized. Interview responses were reviewed to identify for additional partnership opportunities that had not been identified by District staff during the concept development exercise. Similar opportunities were consolidated. To ensure the evaluation team would adequately comprehend the meaning and impact of the opportunity to the District, all opportunities were expressed in the following format:

- Action for the District
- Partner agency
- Goal of partnership

Opportunities were grouped under the following activities:

- Planning partnerships
- Capital project partnerships
- Flood warning partnerships
- Technical partnerships
- Public information and education partnerships
- Regulatory partnerships
- Operations and maintenance partnerships
- Other partnerships

B. Validate suitability of evaluation approach.

Having completed the external data collection exercise, the team reaffirmed the previously-developed evaluation approach and criteria, concluding that the evaluation approach would be suitable to evaluate identified partnerships.

9. Evaluate partnering possibilities.

The assessment portion of C3 FHMP is fully described in Section V of this report.

The team conducted a full-day workshop to review output of the data collection process and evaluate partnerships. Assessment-type data was reviewed and broad conclusions drawn. The draft description of each identified opportunity was reviewed by the team as a group, benefits and implications were discussed, and descriptions were refined for clarity where appropriate. Ultimately, 50 unique opportunities were identified for evaluation.

Following final refinement of the list of opportunities, team members individually evaluated the opportunities within the pre-determined evaluation matrix. The evaluation process produced individual team members' scores from -100 (entirely detrimental) to +100 (entirely beneficial) for each opportunity.

10. Build consensus.

Of the 50 opportunities evaluated, only 16 initially were recommended by all team members unanimously. Remaining opportunities were discussed by the team to reach consensus. Where critical concerns did not exist, the team allowed average pooled scores to drive the team's recommendation. Where significant, merited objections existed, the team attempted to refine the identified opportunity to alleviate those concerns and to achieve a universally-acceptable alternative, while preserving the intent of the identified partnership. This approach increased the team's recommended partnership list to 46. A total of 4 partnerships were, in the collective view of the group, detrimental to the District and were not recommended in any form.

Following the assessment exercise, all team members accepted team recommendations.

11. Develop implementation strategy.

Prioritization and implementation planning are fully described in Section VI of this report.

The C3 FHMP team and District management recognized that the District could not support immediate implementation of 46 partnership recommendations. Recommended opportunities were prioritized, and thirteen partnerships were identified for deliberate action.

For each recommendation, the implementation plan identified a District staff member responsible, a desired end state, and a targeted implementation schedule.

From initial shaping to the identification of C3 FHMP recommendations, the C3 FHMP process was concluded in seven months, with half of the team only modestly involved for the first three months of the effort.



II. TEAM COMPOSITION

TEAM COMPOSITION

C3 FHMP team structure included a core group responsible for management of the process, initial documentation of baseline conditions and internal data collection, as well as six task forces responsible for external data collection. Additional research regarding baseline conditions was performed by Planning & Project Management Division interns Samantha Samples and Cade Furnas. The core team and task force leaders completed evaluation of C3 FHMP recommendations. Team member selection was intended to balance conceptual familiarity with a diversity of skill-sets.





III. CURRENT PARTNERING ENVIRONMENT AND INTERNAL DATA COLLECTION

EXISTING FLOOD HAZARD MITIGATION PARTNERSHIPS AND PERCEIVED OPPORTUNITIES

Existing and historic District partnerships were framed by statutory guidance. A.R.S. § 48-3603, pertaining to powers, duties and immunities of the District, authorizes the District to, “Construct, maintain and operate flood control and storm drainage facilities and regulate floodplains in the district by agreement with [the State of Arizona], counties, other municipal corporations, political subdivisions and other persons and reimburse such agencies or persons for the cost of the work,” and to, “Enter into intergovernmental agreements with other public agencies pursuant to [A.R.S.] title 11, chapter 7, article 3 to carry out the objects and purposes of the district.” A.R.S. § 48-3624 authorizes the District to, “cooperate with the United States and [the State of Arizona] or any instrumentality, department, agency or political or municipal subdivision of either in the construction, maintenance and operation of flood control projects and the enforcement of [A.R.S. Title 48, Chapter 21] and regulations adopted pursuant to it.” A.R.S. § 48-3603 contains further broad guidance, authorizing the District to “enter into contracts and generally do all things which may be necessary to construct, acquire and maintain facilities, operate the District and perform its regulatory functions and which are in the interests of the District.”

The District incorporates flood hazard mitigation partnering in activities related to public involvement and education; flood warning; planning; floodplain management; capital projects and operations and maintenance. These activities are briefly discussed in this document, accompanied by highlights of current partnering practices, opportunities for new partnerships identified by staff, and real and perceived constraints identified by staff.

To develop this section, staff reviewed intergovernmental agreements dating to the 1990s, reviewed applicable policy documents, interviewed 16 staff members and surveyed an additional 17 staff members.

Documentation of the current partnering environment, known opportunities and known constraints was intended to: (1) ensure all critical C3 FHMP external stakeholders were identified; (2) ensure external stakeholder input on known partnering opportunities was captured; and (3) provide a framework for formulating the external data collection approach.

PLANNING AND RELATED ACTIVITIES

Current Partnering Environment

The District's planning program emphasizes a regional, uniform, and coordinated approach to watershed management. This approach works to minimize the public cost of protecting citizens from flooding resulting from private and public development's cumulative effects on drainage characteristics. Activities in the planning program include: Area Drainage Master Studies (ADMSs) and Master Plans (ADMPs); Watercourse Master Plans (WCMPs); and site-specific plans.

"Planning-related activities" (also related to design and other District activities, although they are addressed here) include geographic information systems (GIS), and hydrology and hydraulics.

Planning partnerships typically take the form of interagency and private stakeholder coordination during planning studies. Stakeholders include representatives of appropriate municipalities, state and federal agencies, the public, commercial interests and known area planning groups. The District generally funds ADMPs, ADMSs, WCMPs and GIS work unilaterally.

Unique partnerships have included:

1. Superstition Vistas. Cost share with the private East Valley Partnership.
2. GIS consolidation. Merger of public works GIS divisions.
3. GIS steering committee. Countywide steering committee resulting from C3 GIS effort.
4. Aerial photography. Data-sharing, and cost share agreements whereby municipalities pay for higher resolution photography exceeding the District's (Public Works) baseline.
5. Professional organizations. GIS partnering with over 15 professional GIS organizations.
6. Arizona State University / University of Arizona. University participation in alluvial fan study evaluation, and District participation in Arizona State University emergency management exercises.
7. Desert Research Institute. Engineering partnering related to desert infiltration study.
8. El Rio Research and Development Site. Partnership with the U.S. Bureau of Reclamation, replacing salt cedar with more hydrologically-efficient vegetation.
9. White Tanks Area Drainage Master Plan Hydrology. Cost share agreement with ADOT.
10. Buck Fire Revegetation. Partnership with Arizona Game & Fish Department, whereby the state provides project rights-of-way and the District provides design and construction.
11. HEC-RAS Program Modifications. Agreement with USACE, whereby USACE modified the HEC-RAS program to incorporate the Hager equation to its side weir routine at the District's request (and cost), and provided professional training for District staff.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following partnership approaches associated with planning and related activities.

1. Improve or expand existing planning partnerships.
 - a. Arizona State Land Department.
 - b. Desert Research Institute.
2. Partner with public agencies having mutual planning interests.
 - a. Neighboring counties.
 - b. Neighboring Indian communities.
 - c. Maricopa County Planning & Development – encourage ADMP guideline adoption, with regulations enforced through land zoning restrictions and drainage regulations.
 - d. U.S. Forest Service (specifically identified: Tonto National Forest).
 - e. Farm buereaus and soil conservation districts – mutual goals of watershed health, water quality, storm water quality, erosion control.
3. Partner with public agencies having mutual technical interests.

- a. County Attorney, law enforcement agencies – GIS.
- b. Universities (specifically identified: Arizona State, University, University of Arizona, Northern Arizona University, University of Texas at Austin, University of New Mexico) – applied research and development.
- c. Other flood control districts.
4. Partner with private entities having mutual technical interests (specifically identified: GIS-related software).
5. Partner with private entities having mutual planning interests (specifically identified: Arizona Rock Products Association).
6. Partner with professional organizations and private clubs having mutual interests.
 - a. Conservation/wildlife groups (specifically identified: Audubon Society, Sierra Club) – receive technical expertise related to floodplain preservation in exchange for stakeholder participation role.
 - b. Recreational groups (specifically identified: equestrian groups, off-highway vehicle groups) – sponsorship of District projects.
 - c. Professional organizations (APA, NAFSMA, ASCE, ASLA, etc.).

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting planning and related partnerships.

1. Technical liability associated with data-sharing (specifically noted for GIS).
2. Staff workload limitations.
3. Liability concerns related to Gillespie Dam area.
4. Reluctance of Maricopa County to adopt District ADMPs.
5. Unfamiliarity with other entities.

CAPITAL PROJECTS

Current Partnering Environment

The District primarily accomplishes structural flood hazard mitigation measures through its five-year Capital Improvement Program - the revolving five-year funding plan for capital projects. Under this program, the District has participated in the construction of over 100 flood control structures. Guided by strategic goals and objectives, the Capital Improvement Program drives design and construction of new infrastructure in concert with the District's planning activities, while it simultaneously addresses modification and replacement of existing infrastructure.

The District maintains the five-year Capital Improvement Program as mandated by state statutes under the direction established by the following Board of Directors policy resolutions:

1. FCD 88-08 and 88-08A, General Funding Policy
2. FCD 93-03, Landscaping and Aesthetics Policy
3. FCD 2006R003, Flood-prone Properties Assistance Program
4. FCD 2009R003, Small Project Assistance Program

Prior to their inclusion in the Capital Improvement Program, all capital projects are evaluated under the Capital Improvement Program Prioritization Procedure (regional projects), Small Project Assistance Program (local projects) or Flood-prone Property Assistance Program (flood-prone property buyout).

Partnerships with associated communities and stakeholders are common throughout District capital projects. Other partnerships and practices are best addressed by project type.

Current Partnering Environment: Regional (Non-Federal) Capital Projects

Local projects are typically identified by ADMPs, focused District studies, municipal stormwater master plans or focused municipal studies. Identified projects are evaluated by the District's prioritization procedure on the basis of agency priority, flooding threat, benefited area, significance within a master plan, ancillary benefit, cost, partner cost share and District maintenance impact. Recommended projects are eligible for District funding subject to Board authorization. The District generally seeks at least 50% cost share for projects within municipalities or for projects involving benefit to peer or senior agencies (e.g., county or state transportation departments). Official District policy stipulates that projects shall be recommended based on prioritization procedure results and sequenced based on merit – no firm cost share threshold is specified. Individual members of the Board have noted a preference for 50% cost shares where achievable. Numerous exceptions to, and variations of, this general practice/goal have occurred. Over approximately the past 20 years, examples of variations have included:

1. Loop 303 Drainage Improvements (2007A005). Cost share generally based on the increased cost involved in upsizing ADOT's planned 50-year system to accommodate the District's 100-year ADMP-recommended facility. Overall cost share on the system substantially weighted towards ADOT. Project responsibilities divided geographically.
2. Sonoqui Wash Phase II (2009A011). Approximate 50% cost share achieved through a geographic division of project responsibilities, allowing Queen Creek to construct upstream segment at a later date and allowing the District to construct downstream portion with available funding in a competitive construction bidding climate.
3. Siphon Draw Phase II (2009A005). Mesa cost share 60% due to noted developer benefits.
4. 24th Avenue & Camelback Road Basin (2006A003). Cost share 29% District, 71% Phoenix.
5. Powerline, Vineyard, Rittenhouse FRS Repairs (2007A001). Cost share 50% District, 50% ADWR for one-time repairs.
6. Recreational Use of Rittenhouse Basin (2004A007). Gilbert authorized to purchase recreational use easement over Rittenhouse Basin at 50% of fee value; District to reimburse Gilbert for aesthetic enhancements up to the amount the District would have otherwise spent.
7. Wickenburg Downtown Flooding Hazard Mitigation (2006A004/2005A012). Cost share 35% Wickenburg for design and approximately 15% for construction due to the project merit, the low likelihood of Wickenburg being able to generate matching funding, and the contribution by Wickenburg and ADOT towards constructing a downstream floodplain-mitigating levee at no cost to the District.

8. Olive Avenue Crossing at Reems Road (2004A019). MCDOT to fund additional roadway-related crossing costs during flood control project construction.
9. Scatter Wash Basin (2004A016). Cost share 28% District, 28% Phoenix, 44% ADOT, with caps, due to primary benefit being to ADOT.
10. Queen Creek Wash Improvements (Recker to Higley) (2005A006). Cost share 34% District, 66% Gilbert.
11. Olive Avenue Crossing at Beardsley Canal (2004A005). MCDOT to fund costs associated with extending a culvert crossing to the full ultimate roadway width.
12. 75th Avenue Storm Drain and Durango Regional Conveyance Channel (2003A014). Cost share modified from 50% District to 65% District.
13. Reems Road Channel (2002A014). Project responsibilities geographically divided between Surprise and the District.
14. Doubletree Ranch Road (1999A026). Cost share 60% District, 40% Paradise Valley.
15. Baseline Road and 43rd Avenue (98046). Cost share 66% District, 34% MCDOT.
16. Wickenburg Wash Q (2000A001). Cost share 60% District, 40% Wickenburg.
17. Queen Creek Wash Improvements (Hawes to Power). Cost share 40% District, 60% Queen Creek.
18. Osborne Road Storm Drain Outfall (1999A025, 98024). Cost share 55% District, 30% Scottsdale, 15% Phoenix.
19. Golden Eagle Park Dam Modifications (99014). Cost share 65% District, 35% Fountain Hills.
20. Southern Avenue Channel (99010). Cost share 65% District, 35% Mesa.
21. Maryvale Stadium West Inlet Channel (99007). Cost share \$725,000 District, \$202,000 City, to be paid via a transfer of Upper East Fork Cave Creek unobligated credits and an estimated \$95,000 FEMA grant.
22. Central Arizona Project Canal Five Basins (98049). Cost share 100% District; Mesa to fund landscape/aesthetic enhancements exceeding the District's policy cap.
23. Oak Street Storm Drain Outfall Phase II (98043). Cost share 55% District, 30% Scottsdale, 15% Phoenix.
24. Camelback Ranch North Levee (98031). Cost share \$3,000,000 District, \$4,200,000 Glendale.
25. Southeast Valley Regional Drainage System (98028). District to manage Pima-Maricopa Irrigation Project at GRIC's cost.
26. Bethany Home Outfall Channel Phase I (98006). Cost share 31% District, 69% ADOT.
27. Baseline Road Storm Drain (98001). Cost share 10% District, 90% MCDOT.
28. Estrella Parkway / Bullard Wash (96024). District and MCDOT to fully fund distinct projects; common costs shared 50/50.
29. Salt River South Bank Levee Penetrations (98011). District to fund \$600,000 for levee penetrations; Tempe to fund remaining \$6,900,000 in drainage improvements.
30. Litchfield Park Drainage System (98010). Cost share \$600,000 District, \$1,300,000 Litchfield Park.
31. Rawhide Wash Basin Design (97010). Cost share \$27,000 ASLD, \$110,000 Phoenix, \$83,000 Scottsdale, \$0 District.
32. Maryvale Sunset Basin (96021). District to acquire land; Phoenix to apply cost share credit from IGA 90018A.
33. Reata Pass Wash Channel (Pinnacle Peak to Central Arizona Project Canal Detention Facility) (96013). District to fund flood control bid items, excluding work at DC Ranch; Scottsdale to fund landscape, aesthetic and multi-use costs.
34. Scottsdale/Tempe/Phoenix Study Components of 64th Street Roadway Improvements (96013). Cost share 60% District, 40% Scottsdale for construction; 50/50 for design.
35. Laveen Detention Basin and Golf Course (97001). Cost share \$1,433,750 District, \$6,500,000 Phoenix.
36. Roosevelt Irrigation District Canal Overchute (94016). Project responsibilities divided by location between District, Avondale and SunCor.
37. Salt River South Bank Protection (SR-101L to Country Club Drive) (95005). ADOT to fund 100%; District to maintain for 40 years.
38. 10th Street Wash Basins (94014). District to fund 100% of flood control features; Phoenix to fund 100% of non-flood control features plus Palma Park inlet and storm drain.
39. Beardsley Road Regional Drainage System (94013). Phoenix to acquire all land not owned by the State; District to fund drainage features and be reimbursed 12% for construction management.
40. Dysart Drain (93015). Cost share 50/50 between District and USAF, with USAF capped at \$6,000,000.
41. University Drive (93014). Cost share 1/3 each for District, MCDOT and Mesa (to a Mesa cap of \$400,000).
42. Upper East Fork Cave Creek Laterals (93008). District to fund 100% of land and design costs per IGA 90018A.

43. Queen Creek ADMP Land Acquisition (92009). Queen Creek to attempt to obtain dedications for land rights, future construction IGA credit; purchased land rights to be 100% District cost.
44. Gila Drain Plan (91007). District and State to share the cost of development of the Gila Drain Floodway Plan by ASU.

Current Environment: Federal Capital Project Funding

The District operates and maintains 27 structures (in part or in whole) built with federal government participation.

The USACE served as the federal sponsor for the Arizona Canal Diversion Channel, Indian Bend Wash, Agua Fria River Channelization, New River Channelization, Cave Buttes Dam, Cave Creek Dam, Dreamy Draw Dam, Adobe Dam, New River Dam, McMicken Dam, and features associated with the above.

NRCS served as the federal sponsor for the East Maricopa Floodway; Saddleback FRS; Harquahala FRS; Sunset FRS; Sunnycove FRS; Buckeye FRS Nos. 1, 2 and 3; White Tanks FRS Nos. 3 and 4; Guadalupe FRS; Spook Hill FRS; Signal Butte FRS; Apache Junction FRS; Powerline FRS; Vineyard FRS; Rittenhouse FRS; and features associated with the above.

Additionally, the District partnered with FEMA to accomplish post-disaster flood-prone property buyout in Aguila.

To varying degrees, the District also participated in projects operated and maintained by other agencies that involved federal cost share: the Dysart Drain with the U.S. Air Force; Phoenix Rio Salado, Tempe Rio Salado and Tres Rios with the USACE; and Plan 6 modifications to Roosevelt Dam with the U.S. Bureau of Reclamation.

In recent years, District partnering with federal agencies on capital projects has generally included relatively minor financial and stakeholder involvement on river restoration projects and local sponsorship for dam rehabilitation projects. The District's dam safety program has effectively engaged NRCS as a participant in its rehabilitation program, obtaining or anticipating 65% NRCS cost share in the rehabilitations of White Tanks FRS Nos. 3 and 4, Buckeye FRS No. 1, Powerline FRS, Vineyard FRS and Rittenhouse FRS, and obtaining or anticipating 100% NRCS cost share in interim dam safety modifications/repairs to Saddleback FRS and Powerline FRS. Efforts to obtain NRCS funding participation in construction of the outlet facilities for White Tanks FRS Nos. 3 and 4 have been unsuccessful due to a lack of NRCS program funding. Efforts to obtain USACE funding participation in dam safety modifications to McMicken Dam (both fissure risk zone mitigation and overall rehabilitation/replacement) and Cave Buttes Dam, and to obtain USACE funding participation in Arizona Canal Diversion Channel repairs, have also been unsuccessful.

Participation by NRCS in District rehabilitation and repair projects occurs under the auspices of NRCS's authorized watershed rehabilitation and repair programs, with funding prioritized at a national level based on risk. Participation by the USACE in District projects would typically occur as a result of specific congressional allocations.

FEMA's Hazard Mitigation Grant Program (HMGP) program does allow for submittal of local structural flood control projects, limiting FEMA's funding to \$3 million per project, for a total project cost of \$4 million. However, nationally funded projects of that magnitude are very few. Although HMGP funding for structural projects is an option in concept, the District does not believe benefit calculations for structural projects can fully capture project benefits without extraordinary analytic efforts causing significant cost increases and schedule delay. The District has not pursued funding for a structural (non-flood-proofing) project under the HMGP, nor has any community in Maricopa County.

It is noted that the District additionally funded the rehabilitation of Spook Hill FRS through a contribution of land rights to ADOT, accommodating SR-202L freeway construction.

Current Partnering Environment: Small Projects

The District's pilot Small Project Assistance Program provides a mechanism for the District to commit funding, on a limited basis, to advance localized solutions where flooding has been realized and where regional structural solutions are impractical. The program terms restrict per-project District funding to \$250,000 or 75% of project construction costs, whichever is less. Aggregate annual contributions under the pilot program are capped at \$2,000,000, with a maximum of three annual submittals by each city. Submitting municipalities are solely responsible for project design, rights-of-way acquisition, utility relocations, construction management and operations and maintenance, and are responsible for construction costs in excess of the District's contribution limit. Projects submitted under this program are evaluated

each October, under an entirely objective method, based mainly on the frequency and severity of property flooding mitigated by the proposed project, and on project implementation readiness.

Current Partnering Environment: Flood-Prone Property Assistance Program Acquisition and Flood-Proofing

The Flood-Prone Property Assistance Program funds buyout and flood-proofing of at-risk homes where structural projects are infeasible.

FEMA administers the national HMGP, under which FEMA can assist in funding of flood-prone property buyout, flood-proofing and local flood control projects. National program funding is limited, particularly for projects benefiting homeowners that do not participate in the NFIP, and eligibility is contingent on project benefits demonstrably exceeding costs under FEMA's benefit/cost module. Property buyout and flood-proofing project benefit/cost calculations require AE-zone floodplain delineations that identify flow rates and depths for a minimum of four return frequencies; District floodplain delineation studies typically do not include such data, limiting the number of properties for which FEMA benefit/costs could be calculated without requiring additional study. The District has not submitted to the HMGP due in part to a lack of viable candidates with adequate supporting hydrologic data; however, it is likely that a viable candidate will at some point be encountered and submitted.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following capital project partnership approaches.

1. Increase partnering through changes in cost share practices.
 - a. Relax 50% match requirement.
 - b. Fund design 100%, with credit to be applied in construction agreement.
 - c. Expand concept of delineated responsibilities beyond division of reaches to division of projects – Agency A builds Project A; Agency B builds Project B.
 - d. Expand use of credits for in-kind contributions (include value of dedicated land and/or developer-implemented improvements).
2. Seek public-private partnerships.
 - a. Facilitate creation of special tax zones, community facilities districts, flood protection districts or restoration districts to implement development-driven infrastructure.
 - b. Facilitate creation of improvement districts for retrofit (specifically noted: culverts at development entrances).
 - c. Identify a limited Capital Improvement Program subset to participate in development-driven infrastructure, with a distinct prioritization process.
 - d. Construct facilities connecting scattered development.
3. Partner with public agencies having mutual infrastructure interests.
 - a. Neighboring counties.
 - b. Neighboring Indian communities.
 - c. School districts: trade land cost share for secondary flood control use.
 - d. Arizona State Land Department: trade land for structural benefits.
 - e. Utility companies.
 - f. Maricopa County Parks.
 - g. MCDOT: improve coordination.
 - h. Federal and state environmental and wildlife agencies.
 - i. Planning and development: ensure developers implement planned infrastructure.
 - j. City parks departments: retrofit of basins at parks.
 - k. ADOT: material excavation/disposition coordination.
4. Expand District's activities to foster new partnerships.
 - a. Increase emphasis on small projects.
 - b. Participate in regional roadway flood safety projects (bridges, wash crossings).
 - c. River restoration (concept proposed: collaboration with Maricopa County to fund river restoration, with District providing indirect funding by exchanging Flood Control tax for general fund tax).
5. Seek Proposition 202 Gaming Grants.
6. Explore third-party lobbying.

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting capital project partnerships.

1. Statutory limitations/interpretations.
 - a. Prohibition regarding roadway flood safety projects (bridges, wash crossings).
 - b. Ambiguity regarding river restoration projects.
 - c. Ambiguity regarding pre-development projects due categorization as gifting.
 - d. Market value disposition requirements – prohibit donation of land for recreational use or uses in the general public interest.
 - e. Inability to “loan” project funding without interest from project partners.
2. Litigation and agreements.
 - a. Prohibition against Orme Dam construction.
 - b. Reluctance to accept liability inherent in recreational use.
 - c. Inability to lobby for federal funding.
 - d. Complextiy of obtaining and coordinating federal funding.
3. Formal policies.
 - a. Landscape/aesthetic policy.
4. Informal policies/practices.
 - a. Cost share.
 - b. Reluctance to fund landscape/aesthetics to the policy cap.
 - c. Political concerns.
 - d. Emphasis on 100-year solutions and regional projects.
 - e. Requirement that project partners inherit ownership and maintenance responsibilities.
 - f. Emphasis on schedule over project needs.
 - g. Inadequate vision or innovation.
 - h. Reluctance to increase costs of development (through regional infrastructure contribution requirements).
 - i. Lack of funding for many federal and state programs.

FLOOD WARNING

Current Partnering Environment

The District's early warning system was developed according to the National Weather Service's Automated Local Evaluation in Real Time (ALERT) protocol. Today, this warning system allows time for cities and the county to initiate appropriate responses to save lives and reduce damages within endangered areas.

To advance its flood warning objectives, the District has entered into partnerships with numerous agencies accomplishing installation and maintenance of ALERT monitoring stations, including: the Central Arizona Water Conservation District, the Magma Flood Control District, the City of Scottsdale, the Town of Fountain Hills, the City of Phoenix, ADOT, ADWR and the National Weather Service. The District has partnered with MCDOT to establish road flooding notifications for unbridged crossings and to automate flooded roadway signs. Similarly, the District's Flood Warning Branch created a monitoring system for Rincon Road in the town of Wickenburg. Flood response plans have been established for several cities and towns, and dam emergency action plan development has involved partnerships. Meteorological weather reports are provided to over 150 recipients.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following flood warning partnership approaches.

1. Expand information sharing.
 - a. MCDOT and ADOT. Sharing of ALERT rainfall data indicating potential roadway flooding. Would allow for improved road closure coordination.
 - b. School districts.
 - c. Private entities. Sharing of ALERT data with private entities that rely on irrigation (e.g., agriculture, golf courses).
2. Expand ALERT gage installation/maintenance partnerships.
 - a. Arizona Game & Fish Department. Transmittal of data from thirty Game & Fish dams using District repeaters. Would allow the District to access rainfall data from the otherwise inaccessible Woolsey Peak gage.
 - b. Cities and Towns. Cloning of partnerships established with Town of Fountain Hills and City of Scottsdale, whereby cities pay for hardware and the District performs routine maintenance and links sensors into its ALERT system. Would allow for enhanced flood warning system with limited District cost.

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting flood warning partnerships.

1. Partnership opportunities are limited by the Flood Warning Branch's small staff size.

PUBLIC INFORMATION & EDUCATION

Current Partnering Environment

The District's Public Information Office manages the District's public outreach/education program. The District is dedicated to educating Maricopa County residents and visitors about the hazards of flooding and flood control projects. The District's public information mission is to ensure the public has access to the latest flood hazard safety information through the District Web site, meetings, public service announcements, presentations, and other outreach activities.

Public information and education partnering consists of television marketing, elementary school presentations and project-related outreach.

The District has annual marketing contracts with three network TV stations in Phoenix: KPHO CBS5, KPNX 12News (NBC) and KNXV ABC15. The contracts provide the District with 30-second public service announcements (PSA) broadcast during evening newscasts during the winter and summer rainy seasons. The contracts also provide 15-second PSA box ads which appear on the home page of each TV station Web site. The District uses these PSAs to broadcast flood hazard safety information. The District partners with CBS5 and 12News in support of elementary school science programs related to the study of water by providing "Power of Water" DVDs and activity booklets.

The District previously maintained an 11-year program of conducting presentations about flooding and flood hazard safety to urban-area 4th grade elementary school classrooms to supplement their science curriculum. The final presentation to a Phoenix metro-area school was conducted in 2009; staff intend to shift emphasis to rural schools.

During the design and construction phases of new flood control facilities, the District's Public Information Office works closely with municipal cost-share project partners and consultants to conduct public information activities in support of projects.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following public information partnership approaches.

1. Expanded partnerships with private media outlets.
 - a. Driving safety messages. Additional collaboration with ABC15 regarding flood-related driving safety messaging and a new partnership with 3TV for a children's weather show.
 - b. Direct mail. Feature flood safety messaging and educational outreach in the Arizona Parenting Magazine direct-mail family-oriented publication.
2. Expanded partnerships with public entities having mutual educational interests.
 - a. Partner with the Maricopa County Library and/or Stadium District to use these organizations for free distribution of our flood control messaging while identifying in-kind services the Flood Control District may provide in exchange.
 - b. Reinitiate elementary school education program, with focus modified to target 24 schools in rural areas of Maricopa County. Alternately, expand elementary school educational program to target both rural and urban schools, and/or to target middle and high school students.
 - c. Partner with non-county libraries for distribution of educational materials.

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting public information partnerships.

1. Outreach budget too small to support the cost of large-scale marketing efforts.
2. Outreach budget limits the number of activity booklets which may be printed for use in schools
3. FEMA CRS credit points: The District receives more points if a public outreach program reaches the most people for the least cost. This fact restricts outreach to programs such as televised PSAs which maximize the viewership ratio per dollar spent.

FLOODPLAIN MANAGEMENT

Current Partnering Environment

The 1973 Flood Disaster Protection Act made comprehensive revisions to National Flood Insurance Program (NFIP) Regulations and required all participating communities to adopt and enforce floodplain regulations in return for the availability of flood insurance through the NFIP. The Act also required flood insurance for federally backed financial assistance on buildings located in identified flood hazard areas. In 1973, the State of Arizona passed legislation that empowered cities, towns and counties to adopt floodplain regulations for the management of watercourses within their jurisdictions. In 1984, the state flood control statutes were revised, specifically charging each county's flood control district with floodplain management responsibility. The flood control districts were mandated to identify and delineate floodplains and adopt and enforce floodplain regulations throughout the county unless municipalities specifically resolved to perform their own floodplain management. Maricopa County adopted the revisions, which resulted in the responsibilities of floodplain management being transferred from the county to the District. As such, the District now performs floodplain management activities for unincorporated Maricopa County and 12 incorporated communities in the county. Although areas outside flood hazard areas may be prone to flood-related erosion hazards, the District is not authorized by statute to regulate development in erosion hazard zones outside of an identified floodplain. Cities and towns, however, can choose to regulate erosion hazard zone development within their jurisdictions.

In 1990, the county volunteered to participate in the Community Rating System (CRS) program. In participating, the county agrees to be rated by the federal government on its effectiveness in performing floodplain management. Citizens, within rated communities, may be eligible for flood insurance premium reductions based on the community's rating. Several local communities receive discount ratings based partly on District activities performed on a regional or inter-jurisdictional basis.

District floodplain management partnerships are generally in the following forms:

1. Management of floodplains for 12 incorporated communities.
2. NFIP participation.
3. CRS participation.
4. Participation in ADWR's state floodplain standards work group.
5. Partnership with Maricopa County in developing the county's One-Stop Permit Shop.
6. Cooperating technical partnerships with FEMA to accomplish floodplain mapping and delineations.
7. Community partnerships (financial and/or collaborative) for floodplain delineations.
8. Community partnerships, serving as a technical expert in working with private entities.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following floodplain management partnership approaches.

1. Assume leadership role in areas requiring technical expertise.
 - a. Levee certification. Provide technical assistance.
 - b. Erosion hazards. Provide technical assistance.
 - c. Training. Train MCDOT, Environmental Services, Planning & Development.
2. Partner to reduce redundancy or develop economy of scale.
 - a. Permitting. Develop a cooperative inspection process with county Planning & Development and with city permitting agencies.
 - b. Delineations. Study partnerships with neighboring counties and Indian communities.
3. Partner to gain additional technical expertise.
 - a. Professional organizations. Educational partnerships with APA, ASCE, etc..

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting floodplain management partnerships.

1. Inability to opt out of community floodplain management and, alternately, inability to regulate floodplains for communities that have assumed floodplain management responsibility.
2. Inability to regulate development in erosion hazard zones.
3. Regulatory responsibility to maintain firewall with private entities.
4. Limited federal program funding.

OPERATIONS AND MAINTENANCE, RECURRENT DAM SAFETY MEASURES AND REAL ESTATE

Current Partnering Environment

The District operates and maintains flood control dams, levees, channels and retention basins and ensures that each flood control structure functions as designed and that all dams comply with the licensing standards set by the Arizona Department of Water Resources. Additionally, District maintenance personnel are responsible for District property obtained through its flood-prone property buyout program or incidental to District infrastructure.

Maintenance activities for District structures include conducting annual formal inspections; monitoring significant impoundments; mitigating the effects of erosion and sedimentation; vegetation and vector control; maintenance of channels, floodways and outflow devices; nuisance control; and storm damage repair. Additional recurrent dam safety activities include: conducting quarterly dam operational inspections to guarantee proper operation of outlets and spillways, field surveys, land subsidence monitoring, earth fissure monitoring and development and updating of Emergency Action Plans. Dam safety inspections are performed on an annual basis by District staff. Inspections of outlet pipes by video camera are performed every five years. Field surveys of the dams are required to monitor physical changes to the dams due primarily to embankment and foundation settlement and land subsidence. Most dam surveys are performed under professional consultant service contracts. Land subsidence occurring at and in the vicinity of dams is monitored through use of an engineering tool developed from satellite imagery known as Interferograms which can detect small-scale vertical ground movements over very large areas. Monitoring for the development of new earth fissures is performed through instrumentation installed at identified earth fissure risk zones at dams. Emergency Action Plans are required for all dams and are updated periodically.

The District provides both emergency response and storm monitoring services during flood emergencies or storm events. When an emergency exists, crews are dispatched to monitor the functions of the structures and operate outflow devices to control the release of storm water. Maintenance crews also transport and operate heavy equipment used to protect the public during emergencies and to perform temporary repairs to structures.

Informal dam safety and maintenance partnerships are common. Dam emergency action plans are generally coordinated with pertinent jurisdictions, and operations and maintenance staff routinely coordinate with other jurisdictions and law enforcement agencies. Formal maintenance partnerships are generally embedded in structural project agreements that establish maintenance responsibilities. However, unique formal partnerships have been negotiated as well:

1. At the Arizona Canal Diversion Channel, the District accomplishes maintenance using permitted access road rights from the Salt River Project (SRP).
2. An agreement with the City of Avondale facilitates the installation of pipe rail atop the Agua Fria River levees – the District agreed to share 50% of a capped cost of installing OSHA-standard railing; Avondale would share the remainder of the cost to a public-safety standard.
3. Recreational use agreements have been negotiated with Maricopa County Parks and Recreation, the City of Glendale, the City of Phoenix (at Cave Buttes Dam), the City of Tempe (at Indian Bend Wash), and Arizona State University (at Adobe Dam) authorizing use of District property for recreation with revenue-sharing requirements.
4. The District initiated the process to acquire 60 acres along the New River under the Bureau of Land Management's Recreation & Public Purposes program.

Perceived Opportunities for Expanded Partnerships

Staffmembers suggested further considering the following operations and maintenance, dam safety and real estate partnership approaches.

1. Improve existing operations and maintenance partnerships.
 - a. Improve enforcement of intergovernmental agreement maintenance provisions.
2. Partner with private entities having land conservation or outdoor recreational interests.
 - a. Create volunteer stewardship program (possibly targeting conservation and hiking groups).

- b. Partner with Desert Foothills Land Trust to manage New River Recreation & Public Purposes program acquisition.
3. Partner with public agencies having common maintenance and land management goals.
 - a. Partner with Maricopa County Vector Control and state and county environmental service departments.
 - b. Partner with Arizona Game and Fish Department (authorizing Game and Fish to patrol District properties for trespass violations, illegal dumping, etc.).
4. Shift project agreement philosophies to encourage District maintenance of partnered facilities.

Key Constraints

Staffmembers identified the following constraints, both real and perceived, impacting operations and maintenance, real estate and dam safety partnerships.

1. Inability to expend funding in support of non-flood control objectives (e.g., park maintenance).
2. Requirement to obtain market value for land rights.
3. Liability associated with ownership, operations and maintenance.
4. Limited operations and maintenance staff level.
5. District considered most effective flood control maintenance organization, but District reluctant to assume additional maintenance responsibilities.



IV. EXTERNAL DATA COLLECTION

REGIONAL PARTNERS TASK FORCE

Introduction

The Regional Partners task force sought the input of the following subgroups:

- Federal partner agencies.
- State partner agencies.
- Leading regional flood control districts.
- Neighboring county flood control districts.
- Neighboring Indian communities.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Technical partnerships with other leading flood control districts, federal and state agencies.
- ADMS/P partnerships with neighboring communities.
- Material excavation/disposition partnerships with ADOT.
- ALERT system gage and data-sharing partnerships with all agencies.
- River/wash crossing structure partnerships with ADOT.
- Gaming grants with neighboring Indian Communities.
- Modifications/improvements to existing capital project relationships with ADOT, NRCS and USACE.
- Rights-of-entry partnerships for policing with Arizona Game & Fish Department.

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
Arizona Department of Environmental Quality	Mr. Henry Darwin	Deputy Director	hrd@azdeq.gov	602-771-2300
Arizona Department of Transportation	Mr. Mike Bruder	Transportation Manager	mbruder@azdot.gov	602-712-6836
Arizona Department of Water Resources	Mr. Michael Johnson	Assistant Director and Chief Engineer	mjohnson@azwater.gov	602-771-8649
Arizona Division of Emergency Management	Mr. Lou Trammel	Director	director@azdema.gov	602-464-6203
Arizona Game & Fish Department	Mr. Robert Broscheid	Deputy Director	bbroscheid@azgfd.gov	602-942-3000
Bureau of Land Management	Ms. Joann Goodlow	Realty Specialist	joann_goodlow@blm.gov	623-580-5548
Bureau of Reclamation	Mr. Peter Castaneda	Manager, Water & Land Division	pcastaneda@usbr.gov	623-773-6240
Clark County Regional Flood Control District, NV	Mr. Gale Fraser	General Manager/Chief Engineer	GFraser@ccrfcd.org	702-455-3139
Clark County Regional Flood Control District, NV	Mr. Kevin Eubanks	Assistant General Manager	keubanks@regionalflood.org	702-685-0000
Environmental Protection Agency	Ms. Lisa Hair	[Unknown]	hair.lisa@epamail.epa.gov	202-566-1043
Federal Emergency Management Agency	Mr. Ed Curtis	Regional Engineer	edward.curtis@dhs.gov	510-627-7100
Fort McDowell Yavapai Nation	Dr. Carole Klopatek	Government Relations Director	cklopatek@fimedowell.org	480-789-7261
Gila River Indian Community	Mr. Seaver Fields	Civil Engineer	seaver.fieldsiii@gric.nsn.us	520-562-0003
Harris County Flood Control District, TX	Mr. Steve Fitzgerald	Chief Engineer	steve.fitzgerald@hcfcd.org	713-684-4060
Natural Resources Conservation Service	Mr. Dino DeSimone	Water Resources Specialist	dino.desimone@az.usda.gov	602-280-8786
Pima County	Mr. Lawrence Robison	Engineering Division Manager	larry.robison@rfcd.pima.gov	520-243-1860
Pima County	Ms. Suzanne Shields	Director	suzanne.shields@rfcd.pima.gov	520-243-1800
Pinal County	Mr. Greg Stanley	County Engineer	Gregory.Stanley@pinalcountyaz.gov	520-509-3555
Salt River Pima Maricopa Indian Community	Mr. Phillip Matthews	Assistant Director, Engineering & Construction Services	phil.mathews@srpmic-nsn.gov	480-850-8570
US Army Corps of Engineers	Ms. Gwen Meyer	Project Manager	[Unknown]	[Unknown]
US Fish & Wildlife	Ms. Jean Calhoun	Deputy Field Supervisor	Jean_Calhoun@fws.gov	602-242-0210
Yavapai County Flood Control District	Mr. Charlie Cave	Director	charlie.cave@co.yavapai.az.us	928-771-3197

Approach, Questionnaire and Responses

Interviews were conducted nearly-exclusively by phone. Respondents were asked to address the following:

1. In what areas do you believe your organization's mission and the Flood Control District's mission overlap?
2. What partnerships (formal or informal) do you have with the District in those areas?

3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. Which of the following do you believe most accurately expresses the existing partnerships between your organization and the District?
 - a. Our organizations have no existing partnerships.
 - b. Our organizations have partnerships, but they are of little value to either organization.
 - c. Our organizations have partnerships, and they are substantially more valuable to my organization than to the District.
 - d. Our organizations have partnerships, and they are substantially more valuable to the District than to my organization.
 - e. Our organizations have partnerships, and they are mutually beneficial.
5. What resources (aside from project funding) does the District have that would be most valuable to your organization? Zero, one or multiple items may be selected.
 - a. Hazard education/media program.
 - b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.
 - d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.
 - j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.
 - l. Other (specify).
6. What resources does your organization have that would be most valuable to the District?
- 7a. What opportunities for new partnerships do you believe merit further consideration, and what existing partnerships (if applicable) do you believe may be underutilized?
- 7b. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your organization and the District?
 - a. There are no opportunities for new partnerships between our organizations.
 - b. There are opportunities for new partnerships between our organizations, but they would be of little value to either organization.
 - c. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to my organization than to the District.
 - d. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to the District than to my organization.
 - e. There are opportunities for new partnerships between our organizations, and they would be mutually beneficial.
8. Is there anyone else at your agency that we should contact as part of this effort?

Results

Fifteen of twenty-two contacts provided substantial responses to the task force.

67% indicated that they had mutually-beneficial partnerships with the District; remaining agencies had no partnerships. 100% responded that there were opportunities for mutually-beneficial partnerships with the District. Among those respondents, USBR, EPA, Harris County (Texas) and Clark County (Nevada) had indicated no current partnerships with the District.

All listed District resources were identified as valuable to at least 20% of respondents. Most frequently identified:

- Geographic Information Systems (11/15).
- Flood Warning (9/15).
- Hydrology & Hydraulics (9/15).
- Dam Safety (9/15).
- Civil Structural Engineering (8/15).

Identified potential partnerships of note:

- NRCS funding of ADMS/P projects under the NRCS watershed programs.
- Participation by the District/County in the ADEM statewide mutual aid program.
- AZGFD umbrella agreement with the District for resource-sharing.
- USFWS Partners for Wildlife grants.
- Sharing of expertise through workshops/conferences with Clark County.
- Legislative coordination, FEMA coordination, CRS coordination, public information coordination with neighboring counties.

CITY ENGINEERING TASK FORCE

Introduction

The City Engineering task force sought the input of cities' engineering departments as well as Salt River Project.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Public/private capital project partnerships with cities as intermediaries and/or stakeholders.
- ALERT system gage and data sharing partnerships with cities.
- River/wash crossing partnerships with cities.
- Multiuse flood control (including retrofit) partnerships with cities.
- Increased capital project partnership opportunities with cities through relaxation of cost share practices.
- Increased small project partnership opportunities with cities through increased program emphasis.
- River restoration partnerships with cities.
- Modified maintenance partnership standards with cities, with District more frequently assuming maintenance.
- Technical assistance partnerships with cities.

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
City of Avondale	Mr. Chris Hamilton	Project Manager	chamilton@avondale.org	623-333-4218
City of Avondale	Ms. Sue McDermott	City Engineer	smcdermott@avondale.org	623-333-4211
City of Chandler	Ms. Sheina Hughes	City Engineer	sheina.hughes@chandleraz.gov	480-782-3300
City of El Mirage	Mr. Lance Calvert	Public Works Director	lcalvert@cityofelmirage.org	623-876-2971
City of Glendale	Mr. Greg Rodzenko	Assistant City Engineer	grodzenko@glendaleaz.com	623-930-3623
City of Glendale	Mr. Larry Broyles	Engineering Director	lbroyles@glendaleaz.com	623-930-3630
City of Goodyear	Mr. Keith Brown	Assistant City Engineer	keith.brown@goodyearaz.gov	623-882-7954
City of Litchfield Park	Mr. Darryl Crossman	City Manager	dcrossman@litchfield-park.org	623-935-5033
City of Mesa	Mr. Fred Rustam	Deputy Engineer- Design	fred.rustam@mesaaz.gov	480-644-4688
City of Mesa	Ms. Beth Huring	City Engineer	beth.huring@mesaaz.gov	480-644-2512
City of Peoria	Mr. Burton Charron	Senior Civil Engineer	burton.charron@peoriaaz.gov	623-773-7212
City of Peoria	Mr. Dan Nissen	Assistant City Engineer	dan.nissen@peoriaaz.gov	623-773-5151
City of Phoenix	Mr. Hasan Mushtaq	Floodplain Manager	hasan.mushtaq@phoenix.gov	602-262-4026
City of Phoenix	Mr. Syd Anderson	Engineering Supervisor	syd.anderson@phoenix.gov	602-445-2047
City of Scottsdale	Mr. Scott Strosnider	Stormwater Engineer	sstrosnider@scottsdaleaz.gov	480-312-7055
City of Surprise	Mr. Nick Mascia	Assistant Public Works Director	nicholas.mascia@cityofelmirage.org	623-222-6140
City of Surprise	Mr. Robert Eroh	Associate Engineer	roberte@surpriseaz.gov	623-222-6149
City of Tempe	Mr. Andy Goh	City Engineer	andy_goh@tempe.gov	480-350-8200
City of Tempe	Mr. Chris Kabala	Senior Civil Engineer	chris_kabala@tempe.gov	480-350-8585
City of Tolleson	Mr. Reyes Medrano, Jr.	City Manager	rmedrano@tollesonaz.org	623-936-2772
Salt River Project	Mr. Bob Larchick	Manager, Water Engineering	bob.larchick@srpnet.com	602-236-4637
Town of Buckeye	Mr. Scott Lowe	Public Works Director	slowe@buckeyeaz.gov	623-349-6800
Town of Carefree	Mr. Gary Neiss	Town Administrator	gary@carefree.org	480-488-3686
Town of Cave Creek	Mr. Wayne Anderson	Town Engineer	wanderson@cavecreek.org	480-488-6626
Town of Fountain Hills	Mr. Randy Harrel	Town Engineer	rharrel@fhaz.gov	480-816-5112
Town of Gila Bend	Mr. Rick Buss	Town Manager	rbuss@gilabendaz.org	928-683-2255
Town of Gilbert	Mr. Edgar Medina	Assistant Town Engineer	edgar.medina@ci.gilbertaz.us	480-503-6754
Town of Guadalupe	Mr. Jim Ricker	Public Works Director	jricker@guadalupeaz.org	480-505-5380
Town of Paradise Valley	Mr. Bill Mead	Town Engineer	bmead@paradisevalleyaz.gov	480-348-3529
Town of Queen Creek	Mr. Chris Dovel	Principal Engineer	chris.dovel@queenecreek.org	480-358-3003
Town of Wickenburg	Mr. Rick Austin	Public Works Director	publicworks@ci.wickenburgaz.us	928-684-2761
Town of Youngtown	Mr. Grant Anderson	Consultant	ganderson@willdan.com	602-319-6368

Approach, Questionnaire and Responses

The City Engineering Task Force developed an eleven question survey that was distributed to twenty-four client cities and towns and to Salt River Project. This occurred as part of a "Working Group" session held at the District on October 20, 2010. All twenty-five entities were invited to participate in the session and to discuss and exchange information regarding the topics of the survey questions. Fifteen of the twenty-five invited entities attended the session.

Those in attendance were asked to complete a paper form of the survey at the end of the session and turn it in before leaving the session. Eight surveys were turned in at the conclusion of the session. Three additional surveys were returned after the session via e-mail.

A follow-up e-mail was sent on October 25, 2010 to all invitees to the session as a reminder for those unable to attend and for those who have not yet returned the surveys to complete the surveys and return them to the District by October 28, 2010. An electronic survey was attached to the e-mail to simplify the filling out of the survey. Included in this e-mail was an offer to schedule either a telephone or face-to-face interview for the purpose of discussing and completing the survey. The team received one request for a telephone interview (Town of Paradise Valley). The interview was held on October 29, 2010. This resulted in a total of twelve surveys being completed and returned to the District.

Respondents were asked to address the following:

1. In what areas do you believe your city's mission and the Flood Control District's mission overlap?
2. What partnerships (formal or informal) do you have with the District in those areas?
3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. Which of the following do you believe most accurately expresses the existing partnerships between your city and the District?
 - a. Our agencies have no existing partnerships.
 - b. Our agencies have partnerships, but they are of little value to either agency.
 - c. Our agencies have partnerships, and they are substantially more valuable to my city than to the District.
 - d. Our agencies have partnerships, and they are substantially more valuable to the District than to my city.
 - e. Our agencies have partnerships, and they are mutually beneficial.
5. Which of the following do you believe most accurately expresses the priority of flood control capital projects in your city?
 - a. The highest priority for infrastructure funding.
 - b. A high priority for infrastructure funding, but not the highest.
 - c. A low priority for infrastructure funding.
 - d. Not needed.
- 6A. Would a relaxation in the District's practice of expecting a 50 percent funding match for flood control capital projects increase the implementation opportunities for flood control capital projects in your city?
 - a. Yes.
 - b. Yes, but only if the cost share required by my city were less than 25%.
 - c. No, cost share requirements do not impact my city's ability to implement flood control capital projects.
- 6B. What alternative cost share methods would be preferable to your city?
7. What resources (aside from project funding) does the District have that would be most valuable to your city? Zero, one or multiple items may be selected.
 - a. Hazard education/media program.
 - b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.
 - d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.
 - j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.

- l. Other (specify).
8. What resources does your city have that would be most valuable to the District?
- 9A. What opportunities for new partnerships do you believe merit further consideration, and what existing partnerships (if applicable) do you believe may be underutilized?
- 9B. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your city and the District?
 - a. There are no opportunities for new partnerships between our agencies.
 - b. There are opportunities for new partnerships between our agencies, but they would be of little value to either agency.
 - c. There are opportunities for new partnerships between our agencies, and they would be substantially more valuable to my city than to the District.
 - d. There are opportunities for new partnerships between our agencies, and they would be substantially more valuable to the District than to my city.
 - e. There are opportunities for new partnerships between our agencies, and they would be mutually beneficial.
10. What is your understanding of your city's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be funded?
 - a. Entirely by future development.
 - b. Entirely by the public.
 - c. With costs shared between developers and the public.
 - d. No position.
11. What is your understanding of your city's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be implemented?
 - a. Entirely by developers.
 - b. Entirely by government.
 - c. By developers, with government input.
 - d. By government, with developer input.
 - e. No position.

Results

Twelve of thirty-two contacts provided substantial responses to the task force.

All respondents with the exception of Youngtown reported having mutually-beneficial partnerships with the District. The City of Peoria reported opportunities for partnerships being of greater benefit to the city than to the District; remaining entities reported opportunities as being of mutual benefit.

A majority of respondents (75%) indicated that flood control infrastructure was a high priority (but not the highest priority) for their city's infrastructure funding; remaining respondents indicated it was a low priority (City of Mesa, Town of Gilbert, City of Goodyear).

A majority of respondents (75%) indicated that increasing standard District cost shares would increase flood control implementation opportunities in their cities; two (City of Goodyear, Town of Paradise Valley) indicated city cost share would need to be less than 25%; one (Salt River Project) indicated a cost share change would be immaterial.

All entities indicated that the cost of regional infrastructure for future development should be shared between developers and the public.

Sixty-four percent believed public/private infrastructure should be implemented by government with developer input; remaining respondents believed it should be implemented by developers with government input.

All listed District resources were identified as valuable to at least 20% of respondents with the exception of dam safety and real estate resources. Most frequently identified:

- Floodplain Management (10/12).
- Hydrology & Hydraulics (9/12).
- Flood Warning (7/12).

Input regarding preferable alternative cost share methods:

- Case-by-case cost share determination, factoring regional significance of project and available city funding.
- Additional consideration for land costs and staff management time.
- Greater in-kind consideration.
- Greater leeway for smaller communities.
- Greater District cost share where flows originate outside city borders (or obtain funding from originators).
- Allowance for deferred landscape/aesthetic improvements.
- Economic basis for cost share (greater District cost share during economic downturns).
- Greater cost share consideration for maintenance responsibility.
- Index basis for cost share, varying with economic climate, local resource constraints, population, and benefited area.
- In-kind consideration for developer contributions.

Identified potential partnerships of note:

- Permitting coordination.
- Educational presentations for governing bodies.
- Educational presentations for community groups.
- Increased emphasis on eliminating floodplain inaccuracies.
- Partnerships to improve transportation crossings of significant washes.
- Partnerships for use of District land consistent with city general plans.
- Partnerships for mining oversight.
- Partnerships for technical outreach and training.
- District assistance with formulation of stormwater utility programs.
- Modify small project program to recognize sediment source abatement, structural continuity and critical facility protection.
- Increased emphasis on District as an operator-maintainer.
- Partnerships for joint-use of irrigation facilities.

CITY PLANNING TASK FORCE

Introduction

The City Planning task force sought the input of cities' planning departments.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Public/private partnership implementation coordination.
- Partnerships for increased emphasis on ADMP adoption by cities.

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
City of Avondale	Ms. Tracy Stevens	Planning Manager	tstevens@avondale.org	623-333-4000
City of Chandler	Mr. Jeff Kurtz	Planning Administrator	jeff.kurtz@chandleraz.gov	480-782-3019
City of El Mirage	Mr. Mark Smith	Senior Planner	msmith@cityofelmirage.org	623-876-2935
City of Glendale	Mr. Jon Froke	Planning Director	jfroke@glendaleaz.com	623-930-2585
City of Glendale	Mr. Thomas Ritz	Senior Planner	tritz@glendaleaz.com	623-930-2588
City of Goodyear	Mr. Joe Schmitz	Planning Manager	joe.schmitz@goodyearaz.gov	623-932-3005
City of Litchfield Park	Ms. Pam Maslowski	Planning Services Coordinator	pmaslowski@litchfield-park.org	623-935-5033
City of Mesa	Mr. John Wesley	Planning Director	john.wesley@mesaz.gov	480-644-2385
City of Peoria	Mr. Shawn Kreuzwiesner	Engineering Planning Manager	Shawn.Kreuzwiesner@peoriaaz.gov	623-773-7643
City of Phoenix	Ms. Carol Johnson	Planning Manager	caroljohnson@phoenix.gov	602-261-8289
City of Scottsdale	Mr. Michael Clack	Director of Development	mclack@scottsdaleaz.gov	480-312-7629
City of Scottsdale	Ms. Connie Padian	Advanced Planning Director	cpadian@scottsdaleaz.gov	480-312-2664
City of Surprise	Ms. Vineetha Kartha	Planner	vineetha.kartha@surpriseaz.gov	623-222-3155
City of Tempe	Mr. Steve Abrahamson	Principal Planner	steve_abrahamson@tempe.gov	480-350-8359
City of Tolleson	Mr. Paul Magallanez	Economic Development Director	pmagallanez@tollesonaz.org	623-474-4998
Town of Buckeye	Mr. Larry Harmer	Planning & Zoning Manager	lharmer@buckeyeaz.gov	623-349-6000
Town of Carefree	Mr. Gary Neiss	Town Administrator	gary@carefree.org	480-488-3686
Town of Cave Creek	Mr. Ian Cordwell	Director of Planning & Zoning	icordwell@cavecreek.org	480-488-6616
Town of Fountain Hills	Mr. Robert Rodgers	Senior Planner	rrodders@fhaz.gov	480-816-5138
Town of Gila Bend	Mr. Eric Fitzer	Planning & Economic Development Director	efitzer@gilabendaz.org	928-683-2255
Town of Gilbert	Mr. Nathan Williams	Planner II	Nathan.Williams@gilbertaz.gov	480-503-6805
Town of Guadalupe	Mr. Gino Turrubiarres	Community Development Director	gturrubiarres@guadalupeaz.org	480-505-5399
Town of Paradise Valley	Mr. Bill Mead	Town Engineer	bmead@paradisevalleyaz.gov	480-348-3529
Town of Queen Creek	Mr. Tom Condit	Community Development Director	tcondit@queenecreek.org	480-358-3003
Town of Wickenburg	Mr. Steve Boyle	Town Planner	sboyle@ci.wickenburg.az.us	928-684-5451
Town of Youngtown	Mr. Lloyce Robinson	Town Manager	lrobinson@youngtownaz.org	623-933-8286

Approach, Questionnaire and Responses

The City Planning Task Force developed a ten question survey that was distributed to twenty-four client cities. This occurred as part of a "Working Group" session held at the District on October 20, 2010. All twenty-four entities were invited to participate in the session and to discuss and exchange information regarding the topics of the survey questions. Eleven of the twenty-four invited entities attended the session.

Those in attendance were asked to complete a paper form of the survey at the end of the session and turn it in before leaving the session.

A follow-up e-mail was sent on October 25, 2010 to all invitees to the session as a reminder for those unable to attend and for those who have not yet returned the surveys to complete the surveys and return them to the District by October 28, 2010. An electronic survey was attached to the e-mail to simplify the filling out of the survey. Included in this e-mail was an offer to schedule either a telephone or face-to-face interview for the purpose of discussing and completing the survey. The team received one request for a telephone interview (Town of Paradise Valley). The interview was held on October 29, 2010.

In total, ten surveys were completed and returned to the District.

Respondents were asked to address the following:

1. In what areas do you believe your department's mission and the Flood Control District's mission overlap?

2. What partnerships (formal or informal) do you have with the District in those areas?
3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. What is your understanding of your city's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be funded?
 - a. Entirely by future development.
 - b. Entirely by the public.
 - c. With costs shared between developers and the public.
 - d. No position.
5. What is your understanding of your city's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be planned?
 - a. Entirely by developers.
 - b. Entirely by government.
 - c. By developers, with government input.
 - d. By government, with developer input.
 - e. No position.
6. Assuming regional drainage infrastructure for future development were to be constructed with benefiting landowners' funding (in whole or in part), how should those landowners' funding be attained? And who should collect/coordinate that funding – the city or the District? Indicate multiple answers if multiple solutions are equally acceptable.
 - a. Creation of flood control special tax zones.
 - b. Creation of improvement districts (e.g., community facilities districts, flood protection districts).
 - c. Levying of impact fees.
 - d. Public-private cost share agreements.
 - e. Other (specify).

 - f. Landowner funding collected/coordinated by the city.
 - g. Landowner funding collected/coordinated by the District.
7. Which of the following do you believe most accurately expresses the existing partnerships between your department and the District?
 - a. Our departments have no existing partnerships.
 - b. Our departments have partnerships, but they are of little value to either department.
 - c. Our departments have partnerships, and they are substantially more valuable to my department than to the District.
 - d. Our departments have partnerships, and they are substantially more valuable to the District than to my department.
 - e. Our departments have partnerships, and they are mutually beneficial.
8. What resources (aside from project funding) does the District have that would be most valuable to your department? Zero, one or multiple items may be selected.
 - a. Hazard education/media program.
 - b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.
 - d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.

- j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.
 - l. Other (specify).
9. What resources does your department have that would be most valuable to the District?
- 10A. What opportunities for new partnerships do you believe merit further consideration?
- 10B. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your department and the District?
- a. There are no opportunities for new partnerships between our departments.
 - b. There are opportunities for new partnerships between our departments, but they would be of little value to either department.
 - c. There are opportunities for new partnerships between our departments, and they would be substantially more valuable to my department than to the District.
 - d. There are opportunities for new partnerships between our departments, and they would be substantially more valuable to the District than to my department.
 - e. There are opportunities for new partnerships between our departments, and they would be mutually beneficial.

Results

Ten of twenty-six contacts provided substantial responses to the task force.

Six respondents reported having mutually-beneficial partnerships with the District (Avondale, Glendale, Goodyear, Paradise Valley, Surprise, Tempe); four reported having no existing partnerships with the District (Gilbert, Mesa, Peoria, Phoenix). The City of Mesa reported opportunities for partnerships of little value; remaining respondents reported opportunities for mutually-beneficial partnerships.

The cities of Avondale and Goodyear indicated that regional infrastructure supporting development should be funded by development exclusively; the remaining eight respondents indicated costs should be shared between government and developers.

All respondents indicated that regional infrastructure supporting development should be planned by government with developers' input; the Town of Paradise Valley additionally supported planning by development with government input.

All listed mechanisms for assembling private funds for pre-development infrastructure were supported by at least six of the ten respondents; improvement districts were most accepted (by eight of the ten respondents), followed by impact fees (seven of ten).

Five of ten respondents (Avondale, Goodyear, Paradise Valley, Surprise, Tempe) indicated that landowner funding should be collected/coordinated by the applicable city; two (Gilbert, Phoenix) indicated that the District should collect/coordinate; the City of Peoria indicated that either approach could be acceptable.

All listed District resources were identified as valuable to at least 20% of respondents. Most frequently identified:

- Floodplain Management (8/10).
- Hydrology & Hydraulics (7/10).
- Geographic Information Systems (7/10).
- Flood Warning (6/10).
- Landscape Architecture/Context-Sensitive Design/Multiuse Planning (6/10).

Identified potential partnerships of note:

- Development and management of an "Adopt-a-River" program.
- Preservation planning of riparian and wildlife areas.
- Vegetation management.

- Floodway enhancement to develop trails and parks.
- ADMP implementation partnerships.
- Non-structural flood protection implementation partnerships.
- Increased allowance for in-kind contributions.
- River development.
- Expansion of weather data collection points.
- Increased District assumption of maintenance responsibilities for regional non-park-like structures.
- District processing of USACE Section 404 permits.
- Outreach and education programs.
- Increased emphasis on local drainage projects.
- Increased involvement in general plan and open-space plan development.

EDUCATION & TECHNOLOGY TASK FORCE

Introduction

The Education & Technology task force sought the input of universities, professional organizations and school districts.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Applied research and development partnerships with universities.
- Education partnerships with school districts.
- Technical resource sharing/professional development partnerships with professional organizations.

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
American Institute of Hydrology	Dr. Miguel Medina, Jr.	President	miguel.medina@duke.edu	919-660-5195
Arizona Floodplain Management Association	Mr. Craig Sellers	Chair	craig.sellers@yumacountyaz.gov	928-817-5122
Arizona State University	Dr. William Badger	Professor of Construction	bill.badger@asu.edu	480-965-2499
Association of State Floodplain Managers	Mr. Greg Main	Chair	gmain@dnr.in.gov	317-234-1107
Deer Valley Unified School District	Ms. Sharon Matt	Curriculum Contact	sharon.matt@dvusd.org	623-445-4910
Desert Mountain School, Deer Valley School District	Dr. Lynda Johnson	Principal	lynda.johnson@dvusd.org	623-445-3521
Desert Research Institute, Nevada Board of Regents	Dr. Li Chen	Assistant Research Professor	li.chen@dri.edu	702-862-5349
Desert Research Institute, Nevada Board of Regents	Dr. Markus Berli	Assistant Research Professor	Markus.Berli@dri.edu	702-862-5452
Mesa Unified School District	Dr. Suzan Deprez	Assistant Superintendent, Curriculum and Instruction	sdeprez@mpsaz.org	480-472-0340
Natl. Assoc. of Floodplain & Storm Water Mgt. Agencies	Ms. Susan Gilson	Executive Director	sgilson@nafsma.org	202-289-8625
Northern Arizona University	Dr. Charlie Schlinger	Associate Professor, Civil Engineering	charles.schlinger@nau.edu	928-523-0652
Phoenix Union High School District	Ms. Carol Nau	Curriculum Manager	cnau@phhs.k12.az.us	602-764-1500
Rainbow Valley Elementary	Dr. Michael Cagle	Principal	mcagle@liberty.k12.az.us	623-372-2830
Scottsdale Unified School District	Ms. Karen Benson	Beginning Teacher Mentor Program	kbenson@susd.org	480-484-8042
Taft Elementary Mesa Unified District	Mr. Russ Heath	Principal	[Unknown]	480-472-9100
University of Arizona	Dr. Thomas Maddock, III	Prof. and Head of Dept. of Hydrology & Water Resources	maddock@hwr.arizona.edu	520-621-7120
University of Arizona Cooperative Ext., Maricopa Cty.	Ms. Summer Waters	Assistant Agent	SWaters@cals.arizona.edu	602-827-8200 X349
Valley Forward Association	Ms. Diane Brossart	President	info@valleyforward.org	602-240-2408

Approach, Questionnaire and Responses

The Education & Technology Task Force developed an eight question survey. Input was generally collected by phone interviews.

Respondents were asked to address the following:

1. In what areas do you believe your organization's mission and the Flood Control District's mission overlap?
2. What partnerships (formal or informal) do you have with the District in those areas?
3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. Which of the following do you believe most accurately expresses the existing partnerships between your organization and the District?
 - a. Our organizations have no existing partnerships.
 - b. Our organizations have partnerships, but they are of little value to either organization.
 - c. Our organizations have partnerships, and they are substantially more valuable to my organization than to the District.
 - d. Our organizations have partnerships, and they are substantially more valuable to the District than to my organization.
 - e. Our organizations have partnerships, and they are mutually beneficial.
5. What resources (aside from project funding) does the District have that could be valuable to your organization? Zero, one or multiple items may be selected.
 - a. Hazard education/media program.

- b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.
 - d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.
 - j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.
 - l. Other (specify).
6. What resources does your organization have that would be most valuable to the District?
- 7A. What opportunities for new partnerships do you believe merit further consideration, and what existing partnerships (if applicable) do you believe may be underutilized?
- 7B. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your organization and the District?
- a. There are no opportunities for new partnerships between our organizations.
 - b. There are opportunities for new partnerships between our organizations, but they would be of little value to either organization.
 - c. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to my organization than to the District.
 - d. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to the District than to my organization.
 - e. There are opportunities for new partnerships between our organizations, and they would be mutually beneficial.
8. Is there anyone else at your agency that we should contact as part of this effort?

Results

Eight of eighteen contacts provided substantial responses to the task force; response rates from professional organizations were notably poor, with only one of five responding.

Two respondents (Desert Research Institute and University of Arizona) reported having mutually-beneficial partnerships with the District; remaining respondents having no existing partnerships with the District. Four respondents (University of Arizona, Northern Arizona University, Desert Research Institute, Arizona Floodplain Management Association) reported opportunities for partnerships with mutual benefit; two reported opportunities for partnerships of little value (Taft Elementary, Mesa Unified School District); two reported opportunities substantially more valuable to their agency than to the District (Desert Mountain School, Phoenix Union High School District).

Most frequently identified resources of value to respondents:

- Hazard Education (6/8).
- Meteorological (6/8).
- Geographic Information Systems (3/8).
- Hydrology & Hydraulics (3/8).
- Landscape Architecture/Context-Sensitive Design/Multiuse Planning (3/8).

Identified potential partnerships of note:

- Education programs in schools.
- Technical partnerships with universities and the Desert Research Institute.
- Watershed stewardship program partnerships with the University of Arizona.

DEVELOPMENT COMMUNITY TASK FORCE

Introduction

The Development Community task force sought the input of developers and development engineers.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Implementation of ADMP infrastructure by development.
- Planning partnerships.
- Implementation of ADMP infrastructure through public/private partnerships or private funding contributions.

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
Blandford Homes	Mr. Jeff Blandford	Division President	lorisdesk@aol.com	480-892-4492
Burch & Cracchiolo	Mr. Ed Bull	Attorney	ebull@bcattorneys.com	602-234-991
D.R. Horton	Ms. Holly James	Vice President: Land Acquisition & Development	hrjames@drhorton.com	480-368-2343
Derito Partners Development, Inc.	Mr. Doug Himmelberger	Vice President	doug.himmelberger@derito.com	480-834-8500
Earl, Curley & LaGarde	Mr. Mike Curley	Partner	mcurley@eclaw.com	602-265-0094
Fulton Homes	Ms. Tammy Borgardt	Land Development Manager	tborgardt@fultonhomes.com	602-694-3247
Hilgart Wilson	Mr. Ron Hilgart	Principal	rhilgart@hilgartwilson.com	602-490-0535
KB Homes	Mr. Sam Griffin	[Unknown]	sgriffin@kbhome.com	480-862-6962
Kent Cooper & Associates	Mr. Kent Cooper	Principal	Kent@CooperAZ.com	480-290-7007
Kitchell Corp	Mr. Brad Anderson	Design/Construction Manager	banderson@kitchell.com	602-264-4411
Land Advisors	Mr. Steve Gervais	Government Liaison	sgervais@landadvisors.com	480-483-8100
PBS&J	Mr. Richard Wallace	Senior Project Manager	rawallace@pbsj.com	480-440-8251
Pederson Group, Inc	Ms. Tracy Follmer	Construction Manager	tfollmer@pedersoninc.com	602-265-2888
Pulte Homes	Mr. Mike Briz	Vice President	mike.briz@pulte.com	480-391-6198
Shea Homes	Mr. David Garcia	Associate Broker	david.garcia@SheaHomes.com	480-348-6157
Stardust Development	Mr. Bob Speirs	Vice President	bspeirs@stardust.com	480-607-5800X226

Approach, Questionnaire and Responses

The Development Community Task Force developed a fourteen question survey. Interviews were held by phone and in person. Respondents were asked to address the following:

1. In what areas do you believe your organization's mission and the Flood Control District's mission overlap?
2. What partnerships (formal or informal) do you have with the District in those areas?
3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. Which of the following do you believe most accurately expresses the existing partnerships between your organization and the District?
 - a. Our organizations have no existing partnerships.
 - b. Our organizations have partnerships, but they are of little value to either organization.
 - c. Our organizations have partnerships, and they are substantially more valuable to my organization than to the District.
 - d. Our organizations have partnerships, and they are substantially more valuable to the District than to my organization.
 - e. Our organizations have partnerships, and they are mutually beneficial.
5. What resources (aside from project funding) does the District have that would be most valuable to your organization? Zero, one or multiple items may be selected.
 - a. Hazard education/media program.
 - b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.

- d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.
 - j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.
 - l. Other (specify).
6. What resources does your organization have that would be most valuable to the District?
 7. How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be funded?
 - a. Entirely by future development.
 - b. Entirely by the public.
 - c. With costs shared between developers and the public.
 - d. No position.
 8. How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be planned?
 - a. Entirely by developers.
 - b. Entirely by government.
 - c. By developers, with government input.
 - d. By government, with developer input.
 - e. No position.
 9. What role do you see development providing in regional infrastructure planning? What role do you see the District providing?
 10. At what stage of development should public/private partnerships be instituted?
 11. Assuming regional drainage infrastructure for future development were to be constructed with benefiting landowners' funding (in whole or in part), how should those landowners' funding be attained? And who should collect/coordinate that funding – the city or the District? Indicate multiple answers if multiple solutions are equally acceptable.
 - a. Creation of flood control special tax zones.
 - b. Creation of improvement districts (e.g., community facilities districts, flood protection districts).
 - c. Levying of impact fees.
 - d. Public-private cost share agreements.
 - e. Other (specify).
 -
 - f. Landowner funding collected/coordinated by the city.
 - g. Landowner funding collected/coordinated by the District.
 12. Please provide any amplifying input on the previous question.
 - 13A. What opportunities for new partnerships do you believe merit further consideration?
 - 13B. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your organization and the District?
 - a. There are no opportunities for new partnerships between our organizations.
 - b. There are opportunities for new partnerships between our organizations, but they would be of little value to either organization.
 - c. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to my organization than to the District.

- d. There are opportunities for new partnerships between our organizations, and they would be substantially more valuable to the District than to my organization.
 - e. There are opportunities for new partnerships between our organizations, and they would be mutually beneficial.
14. Is there anyone else at your organization that we should contact as part of this effort?

Results

Six of sixteen contacts provided substantial responses to the task force. Several respondents entertained discussions but did not wish to reply formally. One additional contact responded but wished to address opportunities for District bond funding rather than partnership opportunities – this input will be addressed outside the scope of this report.

Existing partnerships were characterized irregularly. One respondent identified a lack of existing partnerships; one characterized existing partnerships as more valuable to their agency than to the District; one characterized existing partnerships as more valuable to the District than to their agency (or to the development community); and two identified existing partnerships as mutually beneficial. Three respondents identified an opportunity for mutually-beneficial partnerships; one indicated partnership opportunities would continue to be more valuable to its organization than to the District; and one indicated that partnership opportunities would be of greater value to the District.

All respondents indicated that costs of regional infrastructure supporting development could be shared between developers and the public; one respondent indicated that costs could be borne by developers alone as well.

Three respondents indicated that this infrastructure should be planned by government with developers' input; two indicated it should be planned by developers with government input.

All identified mechanisms for collecting developers' funding were deemed acceptable by at least three respondents with the exception of public-private cost share agreements, which only one respondent listed. The two developer respondents concurred regarding the acceptability of impact fees and flood tax zones.

Only two respondents identified a preference for an agency responsible for collecting landowner contributions – both preferred that the District lead such efforts.

All respondents with one exception identified a need to form public-private partnerships early in the planning process; the exception agency responded that such partnerships should be formed when needs of developers and flood control are imminent.

Most frequently identified District resources of value:

- Floodplain Management (3/5).
- Hydrology & Hydraulics (3/5).
- Geographic Information Systems (3/5).
- Civil Structural Engineering (2/5).
- Meteorological (2/5).
- Real Estate (2/5).

Identified potential partnerships of note:

- Coordination in planning and timing.
- Geographic Information System data-sharing.
- Multi-use facilities.
- Alluvial fans – solution implementation and District expertise.

MARICOPA COUNTY GOVERNMENT TASK FORCE

Introduction

The Maricopa County Government task force sought the input of other county agencies with which the District has partnerships or could have partnerships.

Based on internal data collection, the task force recognized the following broad partnership opportunities prior to the initiation of external data collection:

- Public/private partnership implementation coordination with Planning & Development and Management & Budget.
- ADMP adoption partnerships with Planning & Development.
- River/wash crossing structures & ALERT data sharing partnerships with MCDOT.
- Multiuse and volunteer stewardship program partnerships with Parks.
- Educational partnerships with the Public Information Office and Stadium District.
- Field partnerships with Environmental Services.
- Administrative partnerships with County Real Estate (Finance).
- Training partnerships with MCDOT, Environmental Services and Planning & Development.
- Added coordination with Emergency Management, Government Relations and Planning & Development (permitting)

Contact List

The task force contacted the following representative individuals and agencies for input:

Agency	Name	Position	Email	Phone
Maricopa County Air Quality	Mr. Ken Proksa	Director	kennethproksa@mail.maricopa.gov	602-506-6443
Maricopa County Dept. of Transportation	Mr. Clem Ligocki	Intergovernmental Relations Supervisor	clemligocki@mail.maricopa.gov	602-506-8672
Maricopa County Emergency Management	Mr. Pete Weaver	Director	peteweaever@mail.maricopa.gov	602-273-1411
Maricopa County Environmental Services	Mr. John Kolman	Director	jkolman@mail.maricopa.gov	602-506-4847
Maricopa County Finance/Real Estate	Mr. Dennis Lindsey	Real Estate Services Manager	dennis.lindsey@mail.maricopa.gov	602-506-1067
Maricopa County Government Relations	Mr. Richard Bohan	Director	richardbohan@mail.maricopa.gov	602-506-3056
Maricopa County Library District	Mr. Harry Courtright	Director	HarryCourtright@mclidaz.org	602-652-3030
Maricopa County Library District	Mr. John Werbach	Financial Administrator	JohnWerbach@mclidaz.org	602-652-3051
Maricopa County Management & Budget	Mr. Brian Hushek	Deputy Budget Director	bushkeb@mail.maricopa.gov	602-506-6338
Maricopa County Parks	Mr. R. J. Cardin	Director	rjcardin@mail.maricopa.gov	602-506-2930
Maricopa County Planning & Development	Mr. Darren Gerard	Deputy Planning Director	darrengerard@mail.maricopa.gov	602-506-7139
Maricopa County Public Information	Mr. Richard DeUiarde	Public Information Officer	deuarier@mail.maricopa.gov	602-506-7232
Maricopa County Stadium District	Mr. Daren Frank	Administrative Director, Regional Development Services	darenfrank@mail.maricopa.gov	602-462-6000
Maricopa County Stadium District	Ms. Julie Schweigert	Director	jschweig@mail.maricopa.gov	602-462-6401
Maricopa County Vector Control	Mr. John Townsend	Vector Control Division Manager	jtownsend@mail.maricopa.gov	602-506-0703

Approach, Questionnaire and Responses

The Maricopa County Government Task Force developed an eight question survey. An additional three questions pertaining to pre-development regional infrastructure policy were posed to Management & Budget and Planning & Development. Interviews were held by phone and in person. Eleven contacts provided substantive responses.

Respondents were asked to address the following:

1. In what areas do you believe your department's mission and the Flood Control District's mission overlap?
2. What partnerships (formal or informal) do you have with the District in those areas?
3. What other agencies do you have partnerships (formal or informal) with in those areas? What are the partnerships?
4. Which of the following do you believe most accurately expresses the existing partnerships between your department and the District?
 - a. Our departments have no existing partnerships.

- b. Our departments have partnerships, but they are of little value to either department.
 - c. Our departments have partnerships, and they are substantially more valuable to my department than to the District.
 - d. Our departments have partnerships, and they are substantially more valuable to the District than to my department.
 - e. Our departments have partnerships, and they are mutually beneficial.
5. What resources, services or products (aside from project funding) does the District have that would be most valuable to your department? Zero, one or multiple items may be selected.
- a. Hazard education/media program.
 - b. Civil structural engineering expertise.
 - c. Hydrologic/hydraulic expertise.
 - d. GIS resources.
 - e. ALERT system flood warning resources.
 - f. Meteorological resources.
 - g. Floodplain management expertise.
 - h. Real estate (acquisition, disposition, land management) expertise.
 - i. Flood control structural maintenance expertise.
 - j. Dam safety expertise.
 - k. Landscape architecture/context sensitive design/multiuse planning resources.
 - l. Other (specify)
6. What resources, services or products does your department have that would be most valuable to the District? These may include opportunities for the District to utilize your department as a conduit for obtaining third party resources.
- 7A. What opportunities for new partnerships do you believe merit further consideration, and what existing partnerships (if applicable) do you believe may be underutilized?
- 7B. Which of the following do you believe most accurately expresses the opportunity for new partnerships involving your department and the District?
- a. There are no opportunities for new partnerships between our departments.
 - b. There are opportunities for new partnerships between our departments, but they would be of little value to either department.
 - c. There are opportunities for new partnerships between our departments, and they would be substantially more valuable to my department than to the District.
 - d. There are opportunities for new partnerships between our departments, and they would be substantially more valuable to the District than to my department.
 - e. There are opportunities for new partnerships between our departments, and they would be mutually beneficial.
8. Is there anyone else at your agency that we should contact as part of this effort?

Supplementary Questions:

1. What is your understanding of Maricopa County's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be funded?
- a. Entirely by future development.
 - b. Entirely by the public.
 - c. With costs shared between developers and the public.
 - d. No position.
2. What is your understanding of Maricopa County's position on the following: How should regional infrastructure (freeways, highways, major arterial streets, major drainage facilities) for future development be planned?

- a. Entirely by developers.
 - b. Entirely by government.
 - c. By developers, with government input.
 - d. By government, with developer input.
 - e. No position.
3. Assuming regional drainage infrastructure for future development were to be constructed with benefiting landowners' funding (in whole or in part), how should those landowners' funding be attained? Indicate multiple answers if multiple solutions are equally acceptable.
- a. Creation of flood control special tax zones.
 - b. Creation of improvement districts (e.g., community facilities districts, flood protection districts).
 - c. Levying of impact fees.
 - d. Public-private cost share agreements.
 - e. Other (specify).

Results

Eleven of fifteen contacts provided substantial responses to the task force. Management & Budget responded but did not see a role for their agency related to the survey subject matter.

Three agencies (Stadium District, Library District and Management & Budget) believed they had no existing partnerships with the District; remaining respondents believed existing partnerships were mutually beneficial (MCDOT noted that the partnerships were occasionally of higher value to the District than to MCDOT). Government Relations and Planning & Development did not see opportunities for new partnerships; County Real Estate believed partnerships would be more valuable to their agency than to the District; MCDOT believed there were opportunities for mutual benefit but that implementation should reflect the departments' distinct missions; and remaining departments identified that mutually-beneficial partnership opportunities existed.

In addressing pre-development regional infrastructure questions, Management & Budget generally responded that each case would need to be examined individually and did not wish to reply directly to the interview questions. Planning & Development indicated that costs should be shared between developers and the public; that planning should be accomplished by government with developers' input; and that all indicated mechanisms for obtaining developer funding would be acceptable.

All District resources were identified as valuable to at least 20% of respondents with the exception of dam safety expertise. Most frequently identified District resources of value:

- Geographic Information Systems (6/10).
- Real Estate (5/10).
- Hazard Education (4/10).
- Meteorological (4/10).

Identified potential partnerships of note:

- Landscape/aesthetics (Stadium District).
- Hazard education (Stadium District).
- Geographic Information System data-sharing.
- Sharing of staffing resources (Parks).
- Multi-use facilities (Parks).
- Aerial photography (Emergency Management).
- Educational partnerships (Vector Control).



V. ASSESSMENT

BROAD PARTNERING CONCLUSIONS

The C3 FHMP team examined stakeholders' responses to universal interview questions, drawing the following broad conclusions.

- Most agencies interviewed saw the potential for mutually-beneficial partnerships with the District, but only city engineering contacts were aware of current mutually-beneficial partnerships. Partnerships with city planning departments, universities and other regional flood control districts were the most consistently underutilized.
- Increasing District cost share, on a case-by-case need basis, would improve implementation of needed projects.
- Most stakeholder agencies believe that the cost of funding regional infrastructure for future development should be shared between developers and the public; the C3 FHMP team agreed.
- External stakeholders voiced some level of support for obtaining developer funding through all mechanisms that interviewers identified: flood control tax zones, impact fees, community facilities districts and public-private partnerships. And an equal number of respondents identified the District, as compared to the local municipality, as the best agency to obtain that funding. However, the C3 FHMP team members supported approaches that relied more heavily on cities (and Maricopa County Planning & Development) to obtain appropriate agreements. Generally, the team reasoned that planning authorities have the greatest visibility of broad development negotiations and are best equipped to formulate cohesive development plans and requirements. The team acknowledged that cases may arise where District participation could be deemed appropriate, and that it should not be categorically excluded, but recommended that the District not seek to lead such efforts as a regular business practice.
- In contrast to District staff members' expectations regarding planning coordination, County Planning & Development responded that no new opportunities for partnership with the District existed. The C3 FHMP team identified that this disconnect may require a heightened level of management involvement.

DEVELOPMENT OF ASSESSMENT LIST

Following internal and external data collection exercises, individual identified partnership opportunities were pooled, consolidated as appropriate and listed in a uniform format identifying:

- Action for the District
- Subject of the partnership
- Partner agency (or agencies)
- Purpose of the partnership

The resultant list contained fifty partnership opportunities. At this stage, identified opportunities were listed indiscriminately, without eliminating opportunities that may have been perceived as lacking merit. Partnerships were grouped by functional area.

EVALUATION CRITERIA

Due to the nature of the C3 FHMP exercise, the C3 FHMP team believed that clearly determining whether each potential partnership opportunity provided a net benefit or detriment to the District was critical. Partnerships that would be overall detrimental to the District would be categorically excluded from further consideration (as opposed to simply lowering the priority of such partnerships). Due to the volume of identified partnership opportunities, providing a score basis for prioritization was equally important.

Six evaluation criteria were identified as appropriate. Team members individually assessed weights for each. Team members were instructed to assess a weight of 1.0 for their lowest-scoring criteria, and to assess a weight for remaining criteria representing that criteria's relative importance with respect to the lowest-scoring weight. The highest weight was to be no higher than 10.0. Team members' assessments were averaged to generate consensus team weights.

For each evaluation criterion and for each partnership opportunity, team members would indicate a score ranging from +3 (indicating a high benefit for that category) to a -3 (indicated a high detriment for that category). After weighting and

averaging, each identified partnership opportunity would be assessed a team score ranging from a maximum of +100 to a minimum of -100. Previously-generated weights were normalized to match this goal.

Following evaluation, any partnership with a score higher than 0 would be deemed overall beneficial to the District; any partnership with a score lower than 0 would be deemed overall detrimental to the District. Beneficial partnerships would then be prioritized based largely on score. The team formed the following criteria and weights as the basis of evaluation:

Weight	Evaluation Category: Quality
8.8	Positive Score: Evaluated item improves the District's performance related to its mission. Negative Score: Evaluated opportunity reduces the District's performance related to its mission.
Weight	Evaluation Category: Cost/Revenue
7.0	Positive Score: Evaluated item has a net positive financial impact on the District. Negative Score: Evaluated item has a net negative financial impact on the District.
Weight	Evaluation Category: Ancillary Benefit
5.4	Positive Score: Evaluated opportunity would have positive impacts ancillary to the District's mission (e.g., environmental, multiuse, transportation). Negative Score: Evaluated opportunity would have negative impacts ancillary to the District's mission (e.g., environmental, multiuse, transportation).
Weight	Evaluation Category: Simplicity
4.5	Positive Score: Evaluated item can be implemented without major legislative or policy changes, and is perceived as politically acceptable. Negative Score: Evaluated item would require major legislative or policy changes to be implemented, and/or is perceived as politically unacceptable.
Weight	Evaluation Category: Economic Impact
4.0	Positive Score: Evaluated item would have a positive impact on the area's economy. Negative Score: Evaluated item would have a negative impact on the area's economy.
Weight	Evaluation Category: Staff Time Impact
3.6	Positive Score: Evaluated opportunity would reduce District staff time associated with an existing District activity. Negative Score: Evaluated opportunity would require substantial additional District staff time if implemented.

EVALUATION RESULTS

Detailed information regarding scoring is contained in Section VIII of this report including averages for each individual evaluation category and categorizations. Raw scores were generated on the basis of the exact category averages, multiplied by the category weights. Team members discussed each recommendation individually to ensure a consensus could be reached. Where appropriate, draft language associated with each opportunity was modified to address major concerns of dissenting team members while maintaining the intent of the partnership. With raw scores as a basis, the team assessed priorities of recommended partnerships. Prioritization orders were adjusted to reflect the team members' judgment. The following pages identify summary recommendations assessed by the team.

Seven partnerships were deemed by the team as having the highest priority irrespective of raw score:

1. Emphasize partnerships with city planning departments for joint adoption of, and coordination on, District ADMS/Ps to increase developer implementation.
2. Develop partnerships with Maricopa County Planning & Development for joint adoption of, and coordination on, District ADMS/Ps to increase developer implementation.
3. Emphasize partnerships with MCDOT for coordination on District ADMS/Ps and MCDOT planning to increase alignment of the District's Capital Improvement Program and MCDOT's Transportation Improvement Program.
4. Emphasize partnerships with cities for small projects by increasing small project program capacity to better address local flooding hazards.
5. Emphasize partnerships with cities for regional projects by increasing consideration for in-kind cost share contributions.
6. Develop partnership with cities for periodic countywide flood control meetings to increase countywide flood control technical expertise and coordination.
7. Develop partnership with cities and other agencies to include links on the District public web site to other-agency flood control contract advertisements to increase bid competition.

An additional six partnerships were deemed appropriate for action by District management:

1. Develop partnerships with NRCS for joint development, funding and implementation of District ADMS/Ps to obtain federal funding.
2. Emphasize partnerships with cities for regional projects by increasing District cost share to better address regional flooding hazards.
3. Emphasize partnerships with cities and other agencies for distribution of ALERT system data to increase ALERT system effectiveness.
4. Develop partnerships with other agencies for GIS data-sharing to increase data availability and operational efficiency.
5. Emphasize partnerships with cities for O&M field cross-training to increase efficiency and ensure standards are met.
6. Develop partnerships with cities for District inheritance of O&M responsibilities on major new regional structures, where appropriate, to ensure standards are met.

SUMMARY RESULTS

Planning Partnerships

1	Emphasize partnerships with city planning departments for joint adoption of and coordination on District ADMS/Ps to increase developer implementation. Recommended. Note: unanimous.
2	Develop partnerships with Maricopa County P&D for joint adoption of and coordination on District ADMS/Ps to increase developer implementation. Recommended with comment. Difficult implementation noted.
3	Emphasize partnerships with Maricopa County DOT for coordination on District ADMS/Ps and MCDOT planning to increase alignment of District CIP and MCDOT TIP. Recommended with comment. Ensure agencies' schedule emphasis is not driven by partnership opportunities; flood control needs should drive planning study prioritization by District.
4	Emphasize partnerships with developers for planning, design and construction timing coordination to improve efficiency. Recommended with comment. Ensure District maintains control of schedule and is not made to developers' desires.
5	Develop partnerships with neighboring counties for joint development/funding/implementation of District ADMS/Ps to obtain inter-county funding and/or increase system efficiency. Recommended. Note: unanimous.
6	Develop partnerships with NRCS for joint development/funding/implementation of District ADMS/Ps to obtain federal funding. Recommended with comment. Potential for substantial delays in implementation; pursue with caution.
7	Emphasize partnerships with city planning departments for increased District stakeholder involvement in city general plan development to increase coordination and efficiency. Recommended.
8	Emphasize partnerships with ADOT for increased material excavation and disposition coordination to reduce construction costs. Recommended. Note: unanimous.
9	Emphasize partnerships with cities for non-structural mitigation solutions by providing District funding to increase implementation effectiveness. Conditionally recommended. Non-structural solutions suitable for District cost share exclude purchase of rights-of-way.
10	Develop partnerships with ASLD for joint development/funding/implementation of District ADMS/Ps to increase developer implementation and/or increase system efficiency. Recommended with comment. Difficult implementation noted.
11	Develop partnerships with Indian communities for joint development/funding/implementation of District ADMS/Ps to obtain tribal funding and/or increase system efficiency. Recommended with comment. Recognize potential schedule impacts and apply cautiously.
12	Develop partnerships with cities for joint development/funding/implementation of city habitat/ wildlife/recreation/trail plans to increase multiuse opportunities. Conditionally recommended. Exclude retrofit except where flood control merit exists (e.g., trail providing dust mitigation); require high cost share.
13	Emphasize partnerships with conservation and wildlife groups for planning to leverage biological and environmental expertise. Conditionally recommended. Particularly contingent upon specifics of proposal.

Capital Project Partnerships

1	Emphasize partnerships with cities for small projects by increasing small project program capacity to better address local flooding hazards. Recommended. Note: unanimous.
2	Emphasize partnerships with cities for regional projects by increasing consideration for in-kind cost share contributions. Recommended with comment. Establish guidelines; ensure in-kind contributions are substantive; be conscious of setting precedents.
3	Develop partnership with cities for investigation of stormwater utility programs to increase cities' ability to participate financially in flood control projects. Recommended with comment. Evaluate appropriateness/efficiency of District acting as lead vs. cities - District role may be as expert or as repository of city-derived research. Note: unanimous.
4	Emphasize partnerships with cities for regional projects by increasing maximum District cost share to better address regional flooding hazards. Conditionally recommended. Limit to most critical projects; vary approach depending on economy.
5	Develop partnerships with cities for protection of existing roadways from regional flooding hazards to reduce flooding hazards to the traveling public. Conditionally recommended. Ensure these projects are secondary to property-protection projects; establish guidelines; work with MCDOT to mitigate overlap of responsibilities; difficult implementation noted.
6	Develop partnerships with developers/cities/county for forming tax zones/CFDs/impact fees to reduce public contribution in funding regional infrastructure. Recommended with comment. Political complications noted; identifying benefited area is challenging.
7	Emphasize partnerships with cities/MCDOT for const of flood control culverts reqd for projects to ultimate road width to reduce long-term public expenditures. Conditionally recommended. Upgrade costs at the expense of roadway owner.
7	Pursue Prop 202 Indian Gaming Grants to obtain tribal funding for flood control projects or ancillary components of flood control projects. Recommended with comment. Cumbersome process noted.
9	Develop partnerships with cities for multiuse/aesthetic retrofit of existing flood control structures and/or floodplains to increase multiuse opportunities. Conditionally recommended. Exclude retrofit except where flood control merit exists (e.g., trail providing dust mitigation); require high cost share.

Flood Warning Partnerships

1	Emphasize partnerships with cities/other agencies for distribution of ALERT system data to increase ALERT system effectiveness. Recommended. Note: unanimous.
1	Emphasize partnerships with cities/other agencies for installing and operating ALERT gages to increase ALERT system effectiveness. Recommended. Note: unanimous.

Technical Partnerships

1	Develop partnership with cities for periodic countywide flood control meetings to increase countywide flood control technical expertise and coordination. Recommended. Note: unanimous.
2	Develop partnerships with regional entities/county agencies/cities/developers/others for GIS data-sharing to increase data availability and operational efficiency. Recommended. Note: unanimous.
3	Develop partnership with other FCDs for periodic regional flood control meetings to increase regional flood control technical expertise and coordination. Recommended. Note: unanimous.
4	Emphasize partnerships with universities (and Desert Research Institute) to increase efficiency/effectiveness of flood control technical processes. Recommended. Note: unanimous.
5	Develop partnership with AZGFD for exchange of resources and services (GIS, biological, dam safety, patrol, restoration) to leverage individual areas of expertise. Conditionally recommended. Implement cautiously to avoid compromising emphasis on District mission; dam safety resources already limited.
6	Develop partnerships with professional organizations to increase efficiency/effectiveness of flood control technical processes. Recommended.
-	Develop partnership with cities for District preparation of city 404 permit applications to leverage District expertise and reduce burden on cities. Not recommended. No discernable value to District; substantial staff impact; would require District to be advocate for third-party actions.

Public Information & Education Partnerships

1	Develop partnerships with cities/schools/conservation groups for Adopt-a-River program to reduce river maint. costs, increase river aesthetics and educate citizens. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support. Note: unanimous.
1	Develop partnerships with cities for executive education program to increase governing bodies' understanding of flooding hazards and importance of mitigation. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.
1	Emphasize partnerships with community groups for flood hazard education to increase education program effectiveness. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.
4	Emphasize education partnerships with schools to increase flood hazard education program effectiveness. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.
5	Investigate partnership with UofA Cooperative Extension to insert floodplain management curriculum in Watershed Steward program to develop network of citizen stewards. Conditionally recommended. Need more information regarding program prior to recommending action or lack of action.

Regulatory Partnerships

1	Develop partnership with Maricopa County P&D for cooperative regulatory inspection process to encourage economy of scale and consistency. Recommended with comment. Implementation difficulty noted. Note: unanimous.
2	Emphasize partnerships with cities for permitting coordination to increase effectiveness and increase consistency where desired. Recommended with comment. Implementation difficulty noted. Note: unanimous.
3	Develop partnership with cities for voluntary uniformity of floodplain regulations and interpretations to increase consistency where desired. Conditionally recommended. Limit staff time invested; benefit is not substantial enough to justify major staff effort.

Operations & Maintenance Partnerships

1	Emphasize partnerships with cities for O&M field cross-training to increase efficiency and ensure standards are met. Recommended with comment. Effectiveness may vary depending on resources of other agency and ability to execute. Note: unanimous.
2	Develop partnership with cities for District inheritance of ownership and maintenance responsibilities, where appropriate, on major new regional structures to ensure standards are met. Conditionally recommended. Policy required; only assume O&M where other agency wouldn't be more efficient (e.g., adjacent to roadway, park amenities etc.); ensure staff, equipment, facilities added to compensate.
3	Develop partnership with cities for District inheritance of O&M responsibilities on major existing regional structures to ensure standards are met in exchange for compensation. Conditionally recommended. Case-by-case consideration with limited applications; ensure staff, equipment, facilities added to compensate.
4	Develop partnership with MCDEM for use of District emergency response equipment to increase countywide emergency response capabilities. Conditionally recommended. Ensure operator follows equipment to avoid damage; dam safety needs must supersede other emergency needs.
5	Develop program to pursue USFWS Partners for Wildlife grants to increase ancillary benefit associated with District land. Conditionally recommended. Need more information regarding program prior to recommending action; what strings involved?
-	Develop partnership with AZGFD for patrol of District land to reduce illegal activities and protect habitat. Not recommended. Potential for mission conflict; enforcement value of AZGFD personnel uncertain.
-	Develop partnership with ADEM for District/County participation in Statewide Mutual Aid Agreement to increase emergency resource availability (and contribution). Not recommended. District/County would likely primarily act as donor agency.

Other Partnerships

1	Develop partnership with cities and other agencies including links on District public web site to other-agency flood control contract advertisements to increase bid competition. Recommended with comment. Staff time involved may be more substantial than is apparent.
1	Develop partnership with neighboring counties for legislative coordination to cooperatively advance mutually-desirable agendas. Recommended. Note: unanimous.
2	Emphasize partnership with Maricopa County Government Relations to improve lobbying effectiveness and increase likelihood of federal funding. Recommended with comment. Recognize strings attached to federal funding; recognize opportunities track with political environment.
-	Develop partnership with Stadium District for use of District Landscape/Aesthetic services to increase District revenue. Not recommended. Potential for excessive use of District staff, detracting from primary staff mission.



VI. IMPLEMENTATION PLAN

INTRODUCTION

Background

This implementation plan is intended to delegate action for implementation of C3 FHMP recommendations to appropriate District staff, to formalize intended outcomes, to specify immediate and long-term actions and to present target dates for achieving results.

The implementation plan is not intended to enumerate details of the implementation process but, rather, to convey to staff inheriting these action items a broad framework that would achieve the goals of the C3 FHMP team.

The implementation plan is grouped by functional area, mimicking the functional areas presented in the Assessment section of this report. High-priority recommendations are identified as such, and it is anticipated that those items will receive additional management attention as they progress towards implementation.

Global Implementation Plan

Due to the volume of C3 FHMP recommendations, implementation will require coordination and tracking.

- District Lead: Capital Improvement Program Supervisor.
- Desired End State: C3 FHMP recommendations will be tracked in an ongoing manner, avoiding disjointed communication with stakeholder agencies and ensuring measured use of District resources.
- Action: Capital Improvement Program Supervisor will develop a method for achieving the desired end state.
- Schedule: Method in place within 2 months.
- As a function of this implementation plan, the thirteen action recommendations identified in this report will be the subject of monthly status updates provided to District management.

PLANNING PARTNERSHIP IMPLEMENTATION

Action Recommendations

Emphasize partnerships with city planning department for joint adoption of and coordination on District ADMS/Ps to increase developer implementation. *Recommended.*

- Team Raw Implementation Priority: 1 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: City planning departments will routinely utilize District ADMS/Ps as reference documents, ensuring that development utilizes ADMS data and encouraging implementation of ADMP recommendations where appropriate, or at a minimum, ensuring that development does not preclude/impede implementation of ADMP recommendations.
- Action: Planning Branch will evaluate methods of implementation and formulate an internal policy to achieve the desired end state.
- Schedule: Policy approved by Chief Engineer & General Manager within 12 months.

Develop partnerships with Maricopa County Planning & Development for joint adoption of and coordination on District ADMS/Ps to increase developer implementation. *Recommended; difficult implementation noted.*

- Team Raw Implementation Priority: 2 of 13.
- District Lead: Planning Branch Manager/Floodplain Management & Services Division Manager.
- Desired End State: Maricopa County Planning & Development will routinely utilize District ADMS/Ps as reference documents, ensuring that development utilizes ADMS data and encouraging implementation of ADMP recommendations where appropriate, or at a minimum, ensuring that development does not preclude/impede implementation of ADMP recommendations.
- Action: Coordinating with Floodplain Management & Services Division efforts, Planning Branch will assemble key players, including senior District and Planning & Development management, to establish a partnership framework. Planning Branch and Floodplain Management & Services will evaluate methods of implementation and formulate an internal policy, including a maintenance and monitoring plan, to achieve the desired end state.
- Schedule: Coordination meeting held within 3 months; policy approved by Chief Engineer & General Manager within 12 months.

Emphasize partnerships with Maricopa County Department of Transportation for coordination on District ADMS/Ps and MCDOT planning to increase alignment of District CIP and MCDOT TIP. *Recommended; ensure agencies' schedule emphasis is not driven by partnership opportunities; flood control needs should drive planning study prioritization by the District.*

- Team Raw Implementation Priority: 3 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: The District will identify opportunities for MCDOT-partnered projects at the planning stage, and both agencies will begin deliberate decision-making regarding suitability of each potential partnership, agreement framework and timing.
- Action: Planning Branch will coordinate a meeting for key players, including senior District and MCDOT management and revise quarterly coordination meeting format to identify schedules and roles for each agency.
- Schedule: Coordination meeting held and new format developed within 3 months.

Develop partnerships with NRCS for joint development/funding/implementation of District ADMS/Ps to obtain federal funding. *Recommended; potential for substantial delays in implementation noted; pursue with caution.*

- Team Raw Implementation Priority: 6 of 13.
- District Lead: Capital Improvement Program Supervisor/Planning Branch Manager.
- Desired End State: Where appropriate, the District will pursue NRCS funding for ADMS/Ps and their implementation.
- Action: Capital Improvement Program supervisor will investigate available NRCS programs and forward global recommendations to District management; Planning Branch will pursue NRCS agreements where appropriate to achieve the desired end state.
- Schedule: Investigation within 3 months; implementation ongoing following investigation.

Remaining Recommendations

Emphasize partnerships with developers for planning, design and construction timing coordination to improve efficiency. *Recommended; ensure District maintains control of schedule and is not made to developers' desires.*

- Team Raw Implementation Priority: 4 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: The District will encourage cities to track development timing and proactively coordinate with developers to identify opportunities for partnerships and infrastructure timing needs, and to avoid District inefficiency.
- Action: Planning Branch will coordinate with cities to achieve the desired end state.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with neighboring counties for joint development/funding/implementation of District ADMS/Ps to obtain inter-county funding and/or increase system efficiency. *Recommended.*

- Team Raw Implementation Priority: 5 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: As needs for planning studies and capital projects crossing county lines arise, the District will formally partner with neighboring counties to obtain inter-county funding where possible, to minimize future District implementation costs, and to maximize system effectiveness.
- Action: Planning Branch will pursue inter-county agreements where practical to achieve the desired end state.
- Schedule: Reactive to opportunities.

Emphasize partnerships with city planning department for increased District stakeholder involvement in city general plan development to increase coordination and efficiency. *Recommended.*

- Team Raw Implementation Priority: 7 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: Where appropriate, District staff will encourage cities to ensure that general plans are consistent with existing District ADMS/Ps.
- Action: Planning Branch will develop a process for achieving the desired end state.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with ADOT for increased material excavation and disposition coordination to reduce construction costs. *Recommended.*

- Team Raw Implementation Priority: 8 of 13.
- District Lead: Project Management Branch Manager.
- Desired End State: District and ADOT staff will be aware of agencies' expected excavation and disposition needs and will announce such needs to contractors where appropriate.
- Action: Project Management Branch will request ADOT excavation and disposition needs semiannually and publish results in a manner available to all Planning & Project Management Division staff; and will collect parallel data from District staff regarding District needs and publish results in a manner available to applicable ADOT staff.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with cities for non-structural mitigation solutions by providing District funding to increase implementation effectiveness. *Conditionally recommended; non-structural solutions suitable for District cost share exclude purchase of rights-of-way.*

- Team Raw Implementation Priority: 9 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: Where appropriate, the District will contribute District funding and resources to implementation of non-structural flood hazard mitigation planning recommendations.
- Action: Planning Branch will develop a method for determining appropriateness of District funding under potential scenarios and formulate a policy providing guidelines. Planning Branch will inform cities of resulting policy and coordinate appropriate agreements.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with ASLD for joint development/funding/implementation of District ADMS/Ps to increase developer implementation and/or increase system efficiency. *Recommended; difficult implementation noted.*

- Team Raw Implementation Priority: 10 of 13 (tied).
- District Lead: Planning Branch Manager.
- Desired End State: The District will encourage implementation partnerships with ASLD.
- Action: Planning Branch will coordinate a meeting for key players, including senior District and ASLD management, to establish a partnership framework. Once this framework is established, Planning Branch will establish project-specific partnerships with ASLD as appropriate.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with Indian communities for joint development/funding/implementation of District ADMS/Ps to obtain tribal funding and/or increase system efficiency. *Recommended; recognize potential schedule impacts and apply cautiously.*

- Team Raw Implementation Priority: 10 of 13 (tied).
- District Lead: Planning Branch Manager/Project Management Branch Manager.
- Desired End State: As needs for planning studies and capital projects benefiting tribal land arise, the District will deliberately evaluate opportunities to formally partner with associated Indian communities to obtain tribal funding where possible, to minimize future District implementation costs, and to maximize system effectiveness.
- Action: Planning Branch and Project Management Branch will pursue Indian community agreements where practical to achieve the desired end state.
- Schedule: Reactive to opportunities.

Develop partnerships with cities for joint development/funding/implementation of city habitat/wildlife/recreation/trail plans to increase multiuse opportunities. *Conditionally recommended; exclude retrofit except where flood control merit exists (e.g., trail providing dust mitigation); require high cost share.*

- Team Raw Implementation Priority: 12 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: As opportunities emerge for District participation in development, funding and implementation of habitat, wildlife, recreation and trail plans coincident to flood control needs, the District will evaluate the merit of such participation.
- Action: On a case-by-case basis Planning Branch will evaluate the merit of District participation in subject plans and present recommendations to District management.
- Schedule: Reactive to opportunities.

Emphasize partnerships with conservation and wildlife groups for planning to leverage biological and environmental expertise. *Conditionally recommended; particularly contingent upon specifics of proposal.*

- Team Raw Implementation Priority: 13 of 13.
- District Lead: Planning Branch Manager.
- Desired End State: The District will obtain donated expertise from conservation and wildlife groups to reduce District cost and/or increase simplicity of project implementation.
- Action: Planning Branch will further explore potential benefits of this recommendation and present findings to District management for further evaluation.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

CAPITAL PROJECT PARTNERSHIP IMPLEMENTATION

Action Recommendations

Emphasize partnerships with cities for small projects by increasing small project program capacity to better address local flooding hazards. *Recommended.*

- Team Raw Implementation Priority: 1 of 9.
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: District ability to fund small projects will increase.
- Action: Capital Improvement Program Supervisor will draft modifications to existing program guidance, allowing higher aggregate program expenditures and increasing per-city allowances of annual project submittal quantities.
- Schedule: Policy modifications approved by Board within 6 months.

Emphasize partnerships with cities for regional projects by increasing consideration for in-kind cost share contributions. *Recommended; establish guidelines; ensure in-kind contributions are substantive; be conscious of setting precedents.*

- Team Raw Implementation Priority: 2 of 9.
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: Flexibility in project implementation methods will increase, and implementation opportunities for needed flood control projects will increase as a result.
- Action: Coordinating with District management, Capital Improvement Program Supervisor will draft in-kind contribution guidelines.
- Schedule: Draft guidelines within 6 months.

Emphasize partnerships with cities for regional projects by increasing maximum District cost share to better address regional flooding hazards. *Conditionally recommended; limit to most critical projects; vary approach depending on economy.*

- Team Raw Implementation Priority: 4 of 9.
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: Opportunities to implement needed flood control capital projects will expand due to increased flexibility in cost share practices.
- Action: Draft revised District fiscal policy statement for Board approval, affirming Board acceptance of merit-based cost share.
- Schedule: Policy modifications approved by Board within 6 months.

Remaining Recommendations

Develop partnership with cities for investigation of stormwater utility programs to increase cities' ability to participate financially in flood control projects. *Recommended; evaluate appropriateness/efficiency of District acting as lead vs. cities - District role may be as expert or as repository of city-derived research.*

- Team Raw Implementation Priority: 3 of 9.
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: District ability to implement needed flood control projects will improve due to increased project partner use of dedicated flood control funding mechanisms.

- Action: Poll cities regarding interest in stormwater utility programs; determine appropriate role for the District (if any).
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with cities for protection of existing roadways from regional flooding hazards to reduce flooding hazards to the traveling public. *Conditionally recommended; ensure these projects are secondary to property-protection projects; establish guidelines; work with MCDOT to mitigate overlap of responsibilities; difficult implementation noted.*

- Team Raw Implementation Priority: 5 of 9.
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: Flood protection for the traveling public will improve, without compromise to District's primary focus on providing flood protection for real property.
- Action: Identify statutory limitations; formulate policy to accomplish desired end state; evaluate need for statutory changes; obtain Board approval of policy statement; pursue statutory changes if applicable.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with developers/cities/county for forming tax zones/CFDs/impact fees to reduce public contribution in funding regional infrastructure. *Recommended; political complications noted; identifying benefited area is challenging.*

- Team Raw Implementation Priority: 6 of 9.
- District Lead: Planning Branch Manager.
- Desired End State: Use of funds from benefiting developers for funding regional infrastructure benefiting future development will increase.
- Action: Planning Branch will research funding methods and, coordinating with District management, determine whether to formulate staff policy to accomplish desired end state.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with cities/MCDOT for construction of flood control culverts required for projects to ultimate road width to reduce long-term public expenditures. *Conditionally recommended; upgrade costs at the expense of roadway owner.*

- Team Raw Implementation Priority: 7 of 9 (tie).
- District Lead: Project Management Branch Manager.
- Desired End State: Long-term public expenditures resulting from resizing of culverts during road widening will decrease.
- Action: Upon initiation of project design contracts, identify potential road crossings; notify applicable transportation agency of potential, and obtain decision from agency regarding desire to increase culvert width to ultimate roadway width.
- Schedule: Reactive to opportunities.

Pursue Prop 202 Indian Gaming Grants to obtain tribal funding for flood control projects or ancillary components of flood control projects. *Recommended; cumbersome process noted.*

- Team Raw Implementation Priority: 7 of 9 (tie).
- District Lead: Capital Improvement Program Supervisor.
- Desired End State: District will use tribal funding to reduce flood control taxpayer costs for flood control projects, or to increase its ability to implement incidental ancillary features at no cost to the flood control taxpayer.

- Action: Coordinating with Maricopa County Government Relations, obtain determination from applicable Indian communities on acceptability of flood control projects (or incidental features) under communities' grant programs; formulate, and provide guidance to project managers.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with cities for multiuse/aesthetic retrofit of existing flood control structures and/or floodplains to increase multiuse opportunities. *Conditionally recommended; exclude retrofit except where flood control merit exists (e.g., trail providing dust mitigation); require high cost share.*

- Team Raw Implementation Priority: 9 of 9.
- District Lead: Project Management Branch Manager.
- Desired End State: As opportunities emerge for District participation in multiuse/aesthetic retrofit of existing flood control structures and/or floodplains, the District will have in place an established guideline for evaluating the merit of such participation.
- Action: On a case-by-case basis, Project Management Branch will evaluate opportunities for multiuse/aesthetic retrofit of existing flood control structures and/or floodplains and present recommendations to District management.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

FLOOD WARNING PARTNERSHIP IMPLEMENTATION

Action Recommendation

Emphasize partnerships with cities/other agencies for distribution of ALERT system data to increase ALERT system effectiveness. *Recommended.*

- Team Raw Implementation Priority: 1 of 2 (tie).
- District Lead: Flood Warning Branch Manager.
- Desired End State: Use of ALERT system data by potential beneficiaries will increase, augmenting existing flood warning education programs associated with flood response plan development.
- Action: Flood Warning Branch will hold one or more general presentations regarding flood warning system applications during periodic countywide flood control meetings, inviting appropriate agencies to attend.
- Schedule: Information distributed within 12 months.

Remaining Recommendation

Emphasize partnerships with cities/other agencies for installing and operating ALERT gages to increase ALERT system effectiveness. *Recommended.*

- Team Raw Implementation Priority: 1 of 2 (tie).
- District Lead: Flood Warning Branch Manager.
- Desired End State: ALERT system gages will be installed at all locations requiring system data.
- Action: Flood Warning Branch will create a process and/or staff policy for identifying priority gage locations and proactively pursue partnerships with local agencies for gage installation; based on demand, Flood Warning Branch will evaluate the need for an annual submittal and review process and, if merited, develop such a process.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

TECHNICAL PARTNERSHIP IMPLEMENTATION

Action Recommendations

Develop partnership with cities for periodic countywide flood control meetings to increase countywide flood control technical expertise and coordination. *Recommended.*

- Team Raw Implementation Priority: 1 of 6.
- District Lead: Planning & Project Management Division Manager.
- Desired End State: A routine coordination and technical data-sharing meeting will be established, hosted by the District, for all agencies participating in flood hazard mitigation in Maricopa County (including neighboring counties and Indian communities).
- Action: Coordinating with all District division managers, Planning & Project Management Division will formulate a plan for periodic countywide flood control meetings, contact local and federal agencies whose participation is desired, and lead organization and scheduling of subject meetings.
- Schedule: Plan formulated and first meeting held within 9 months.

Develop partnerships with regional entities/county agencies/cities/developers/others for GIS data-sharing to increase data availability and operational efficiency. *Recommended.*

- Team Raw Implementation Priority: 2 of 6.
- District Lead: GIS Division Manager.
- Desired End State: Routine, formalized voluntary data-sharing among agencies using and developing GIS data will occur.
- Action: Coordinating with the Maricopa County Geographic Information Officer, GIS Division will identify target agencies for data-sharing, formulate a planned approach, develop applicable agreements and administer the GIS data-sharing program.
- Schedule: Agreements developed within 12 months.

Remaining Recommendations

Develop partnership with other regional flood control districts for periodic regional flood control meetings to increase regional flood control technical expertise and coordination. *Recommended.*

- Team Raw Implementation Priority: 3 of 6.
- District Lead: Planning & Project Management Division Manager.
- Desired End State: A periodic coordination and technical data-sharing meeting will be established, hosted by the District or other agencies, for major southwest-area regional flood control agencies.
- Action: Coordinating with all District division managers, Planning & Project Management Division will formulate a plan for periodic regional flood control meetings, contact regional and federal agencies whose participation is desired, and lead organization and scheduling of the first subject meeting.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with universities (including the Desert Research Institute) to increase efficiency/effectiveness of flood control technical processes. *Recommended.*

- Team Raw Implementation Priority: 4 of 6.
- District Lead: Engineering Division Manager.

- Desired End State: The District will execute agreements with universities for completing mutually-beneficial studies.
- Action: Coordinating with all District division managers, Engineering Division will identify potential areas for specific study, investigate university interest in collaboration and formulate applicable agreements.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnership with Arizona Game & Fish Department for exchange of resources and services (GIS, biological, dam safety, patrol, restoration) to leverage individual areas of expertise. *Conditionally recommended; implement cautiously to avoid compromising emphasis on District mission; dam safety resources already limited.*

- Team Raw Implementation Priority: 5 of 6.
- District Lead: Planning & Project Management Division Manager.
- Desired End State: The District will enter a formal relationship with Arizona Game & Fish Department for mutually-beneficial exchanges of services.
- Action: Coordinating with all District divisions and the Arizona Game & Fish Department, Planning & Project Management Division will assess potential for mutually-beneficial exchanges of services and, if appropriate, develop an intergovernmental agreement.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with professional organizations to increase efficiency/effectiveness of flood control technical processes. *Recommended.*

- Team Raw Implementation Priority: 6 of 6.
- District Lead: Engineering Division Manager.
- Desired End State: The District will execute agreements with professional organizations for completing mutually-beneficial studies.
- Action: Coordinating with all District divisions and applicable professional organizations, Engineering Division will assess potential for mutually-beneficial exchanges of services and, if appropriate, develop formal and/or informal agreements.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

PUBLIC INFORMATION & EDUCATION PARTNERSHIP IMPLEMENTATION

Recommendations

Develop partnerships with cities/schools/conservation groups for an Adopt-a-River program to reduce river maintenance costs, increase river aesthetics and educate citizens. *Conditionally recommended; collectively, public information recommendations likely require additional staff to support.*

- Team Raw Implementation Priority: 1 of 5 (tie).
- District Lead: Public Information Officer.
- Desired End State: River maintenance costs will decrease, river aesthetics will improve, and/or citizens' level of knowledge regarding flood hazards/floodplain management will improve as a result of an adopt-a-river cleanup program.
- Action: Coordinating with Real Estate Division, Operations & Maintenance Division, Planning & Project Management Division and external stakeholders, the Public Information Office will determine a role for the District in facilitating an adopt-a-river program and develop a plan for the District to assume that role.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnerships with cities for executive education program to increase governing bodies' understanding of flooding hazards and importance of mitigation. *Conditionally recommended; collectively, public information recommendations likely require additional staff to support.*

- Team Raw Implementation Priority: 1 of 5 (tie).
- District Lead: Public Information Officer.
- Desired End State: City executives and political bodies will place an increased emphasis on flood hazard remediation in response to increased levels of knowledge.
- Action: The Public Information Office will gather individual cities' input on cities' desire for executive-level flood hazard presentations and, coordinating with Planning & Project Management Division and applicable supervisors' offices, will develop and offer such presentations.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with community groups for flood hazard education to increase education program effectiveness. *Conditionally recommended; collectively, public information recommendations likely require additional staff to support.*

- Team Raw Implementation Priority: 1 of 5 (tie).
- District Lead: Public Information Officer.
- Desired End State: Access to flood hazard presentations will increase, improving public knowledge of flooding hazards.
- Action: Public Information Office will gather individual groups' input on groups' desire for flood hazard presentations and will develop and offer such presentations.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize education partnerships with schools to increase flood hazard education program effectiveness. *Conditionally recommended; collectively, public information recommendations likely require additional staff to support.*

- Team Raw Implementation Priority: 4 of 5.
- District Lead: Public Information Officer.
- Desired End State: Access to flood hazard presentations will increase, improving public knowledge of flooding hazards.

- Action: Public Information Office will review the existing school flood hazard education program and develop modifications to increase program outreach and effectiveness.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Investigate partnership with the University of Arizona Cooperative Extension Program to insert a floodplain management curriculum in the Watershed Steward program to develop network of citizen stewards. *Conditionally recommended; need more information regarding program prior to recommending action or lack of action.*

- Team Raw Implementation Priority: 5 of 5.
- District Lead: Floodplain Management & Services Division Manager.
- Desired End State: River maintenance costs will decrease, river aesthetics will improve, and/or citizens' level of knowledge regarding flood hazards/floodplain management will improve as a result of the subject program (or District staff will determine District participation to be inappropriate).
- Action: Coordinating with the Public Information Office, Floodplain Management & Services Division will explore the subject program and potential value to the District and recommend action or inaction as appropriate.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

REGULATORY PARTNERSHIP IMPLEMENTATION

Recommendations

Develop partnership with Maricopa County Planning & Development for cooperative regulatory inspection process to encourage economy of scale and consistency. *Recommended; implementation difficulty noted.*

- Team Raw Implementation Priority: 1 of 3.
- District Lead: Floodplain Management & Services Division Manager.
- Desired End State: Coordination between District and County regulatory inspection processes will improve, and consistency in review comments will increase, resulting in increased clarity for the public.
- Action: Coordinating with Planning Branch efforts, Floodplain Management & Services Division will assemble key players, including senior District and Planning & Development management, to establish a partnership framework. Floodplain Management & Services Division will, if appropriate, formulate an intergovernmental agreement/memorandum of understanding to memorialize resultant conclusions.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnerships with cities for permitting coordination to increase effectiveness and increase consistency where desired. *Recommended; implementation difficulty noted.*

- Team Raw Implementation Priority: 2 of 3.
- District Lead: Floodplain Management & Services Division Manager.
- Desired End State: Where desired, consistency between District and city permitting processes will improve.
- Action: Floodplain Management & Services Division will facilitate implementation of Arizona Department of Water Resources County-Dependent Community Guidelines in Maricopa County.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnership with cities for voluntary uniformity of floodplain regulations and interpretations to increase consistency where desired. *Conditionally recommended; limit staff time invested; benefit is not substantial enough to justify major staff effort.*

- Team Raw Implementation Priority: 3 of 3.
- District Lead: Floodplain Management & Services Division Manager.
- Desired End State: Where desired, consistency between District and city floodplain regulation interpretations.
- Action: Floodplain Management & Services Division will investigate distinctions between city and District floodplain regulation interpretations. Coordinating with the Arizona Floodplain Managers Association, during a periodic countywide flood control meeting, the division will host a periodic working group regarding regulations and interpretations.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

OPERATIONS & MAINTENANCE PARTNERSHIP IMPLEMENTATION

Action Recommendations

Emphasize partnerships with cities for operations and maintenance field cross-training to increase efficiency and ensure standards are met. *Recommended; effectiveness may vary depending on resources of other agency and ability to execute.*

- Team Raw Implementation Priority: 1 of 5.
- District Lead: Operations & Maintenance Division Manager.
- Desired End State: Quality of city-lead flood control facility maintenance will improve as a result of additional training.
- Action: Operations & Maintenance Division will develop formal training program and periodically extend offers to all city maintenance staffs for participation.
- Schedule: Program developed and first training session held within 12 months.

Develop partnership with cities for District inheritance of ownership and maintenance responsibilities on major new regional structures, where appropriate, to ensure standards are met. *Conditionally recommended; policy required; only assume Operations & Maintenance responsibilities where other agency maintenance would not be more efficient (e.g., adjacent to roadway, park amenities etc.); ensure staff, equipment, facilities are added to compensate.*

- Team Raw Implementation Priority: 2 of 5.
- District Lead: Planning & Project Management Division Manager/Operations & Maintenance Division Manager/Financial Supervisor.
- Desired End State: District will maintain appropriate facilities with resources added to compensate.
- Action: Planning & Project Management Division, Operations & Maintenance Division and Finance Branch will jointly assess full resource impact of additional maintenance responsibilities, calculate per-mile/per-acre impacts, obtain Office of Management and Budget concurrence, develop guidelines for determining appropriate facilities for District maintenance, implement guidelines and ensure calculated resource impacts are addressed through the budgeting process.
- Schedule: Resource impact assessment complete and guidelines developed within 12 months.

Remaining Recommendations

Develop partnership with cities for District inheritance of operations and maintenance responsibilities on major existing regional structures to ensure standards are met in exchange for compensation. *Conditionally recommended; case-by-case consideration with limited applications; ensure staff, equipment, facilities added to compensate.*

- Team Raw Implementation Priority: 3 of 5.
- District Lead: Planning & Project Management Division Manager/Operations & Maintenance Division Manager.
- Desired End State: District will maintain appropriate facilities with resources added to compensate.
- Action: Planning & Project Management Division and Operations & Maintenance Division will identify structures being maintained by cities that would more appropriately be maintained by the District, will calculate additional resource requirements for District inheritance of maintenance (using framework identified above), will initiate discussions with current owner agencies and, if appropriate, draft agreements to assume maintenance responsibility.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Develop partnership with MCDEM for use of District emergency response equipment to increase countywide emergency response capabilities. *Conditionally recommended; ensure operator follows equipment to avoid damage; dam safety needs must supersede other emergency needs.*

- Team Raw Implementation Priority: 4 of 5.
- District Lead: Operations & Maintenance Division Manager.
- Desired End State: An acceptable framework will be established in advance of emergency situations for emergency responders to access District resources.
- Action: Upon MCDEM initiating development of a countywide emergency response agreement, Operations & Maintenance will coordinate District input to ensure District resources can be accessed in an appropriate manner, without compromising District dam safety operational needs.
- Schedule: Reactive to MCDEM schedule.

Develop program to pursue USFWS Partners for Wildlife grants to increase ancillary benefit associated with District land. *Conditionally recommended; need more information regarding program prior to recommending action; need to identify strings involved.*

- Team Raw Implementation Priority: 5 of 5.
- District Lead: Planning Branch Manager/Operations & Maintenance Division Manager/Real Estate Division.
- Desired End State: The District will pursue USFWS Partners for Wildlife grants on a case-by-case basis to increase environmental benefits associated with District property (or District staff will determine pursuit of such grants to be inappropriate).
- Action: Planning Branch will investigate all aspects of the USFWS Partners for Wildlife grant program and, after incorporating the input of Operations & Maintenance and Real Estate divisions, forward recommendations to District management regarding the merit of pursuit of this grant program and parameters for case-by-case considerations.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

OTHER PARTNERSHIP IMPLEMENTATION

Action Recommendation

Develop partnerships with cities and other agencies including links on District public web site to other-agency flood control contract advertisements to increase bid competition. *Recommended; staff time involved may be more substantial than is apparent.*

- Team Raw Implementation Priority: 1 of 3 (tie).
- District Lead: Contracts Branch Manager.
- Desired End State: Consultant and contractor competition for District and other-agency-lead flood control projects will increase following formation of a centralized repository for flood control project advertisement links in Maricopa County.
- Action: Contracts Branch will develop a process for continuously identifying other-agency flood control-related contract advertisements, and publishing links to those advertisements on the District's procurement site and communicate service to consultant and contractor communities; Planning & Project Management Division will forward known other-agency construction contract advertisements to Contracts Branch.
- Schedule: Process developed and initial links published within 12 months.

Remaining Recommendations

Develop partnerships with neighboring counties for legislative coordination to cooperatively advance mutually-desirable agendas. *Recommended.*

- Team Raw Implementation Priority: 1 of 3 (tie).
- District Lead: Chief Administrator.
- Desired End State: District ability to advance legislative input will improve through increased coordination with neighboring counties.
- Action: The District's Chief Administrator will routinely seek input from all District divisions regarding desired legislative action and, coordinating with the General Counsel and Chief Engineer & General Manager, will pursue other counties' support.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.

Emphasize partnership with Maricopa County Government Relations to improve lobbying effectiveness and increase likelihood of federal funding. *Recommended; recognize strings attached to federal funding; recognize opportunities track with political environment.*

- Team Raw Implementation Priority: 3 of 3.
- District Lead: Planning & Project Management Division Manager/Chief Administrator.
- Desired End State: District coordination with Maricopa County Government Relations will improve to maximize opportunities to obtain federal funding.
- Action: Planning & Project Management Division and the Chief Administrator will collaborate with Maricopa County Government Relations to ensure potential opportunities for funding are fully explored and monitored.
- Schedule: Proactive action pending staff availability; reactive to opportunities in interim.



VII. CORRESPONDENCE & PRESENTATIONS

Christopher Fazio - FCDX

From: Anna Medina - FCDX
Sent: 2010-09-28 10:00
To: smcdermott@avondale.org; kurt.krause@chandleraz.gov; lcalvert@cityofelmirage.org; lbroyles@glendaleaz.com; grodzenko@glendaleaz.com; dramirez@goodyearaz.gov; dcrossman@litchfield-park.org; beth.huning@mesaaz.gov; andrew.granger@peoriaaz.gov; wylie.bearup@phoenix.gov; dworth@scottsdaleaz.gov; robert.beckley@surpriseaz.com; andy_goh@tempe.gov; rmedrano@tollesonaz.org; slowe@buckeyeaz.gov; gary@carefree.org; wanderson@cavecreek.org; tward@fh.az.gov; fbuss@gilabendaz.org; lonnief@ci.gilbert.az.us; jricker@guadalupeaz.org; acooper@paradisevalleyaz.gov; chris.dovel@queencreek.org; publicworks@ci.wickenburg.az.us; jmendez@youngtownaz.org; bob.larchick@srpnet.com; neil.s.erwin@usace.army.mil; casey.deshong@dhs.gov; david.mckay@az.usda.gov; don.paulus@az.usda.gov; joann_goodlow@blm.gov; pcox@usbr.gov; hair.lisa@epamail.epa.gov; RDTuggle@fws.gov; mbruder@azdot.gov; director@azdema.gov; klsmith@azwater.gov; dvarnecke@azgfd.gov; hrd@azdeq.gov; seaver.fieldsiii@gric.nsn.us; brianmeyers@srpmic-nsn.gov; cklopatek@ftmcdowell.org; web.county.engineer@co.yavapai.az.us; suzanne.shields@rfcd.pima.gov; larry.robison@rfcd.pima.gov; Gregory.Stanley@pinalcountyaz.gov; steve.fitzgerald@hcfcd.org; GFraser@ccrfcd.org; keubanks@regionalflood.org; tstevens@avondale.org; david.delatorre@chandleraz.gov; msmith@cityofelmirage.org; jfroke@glendaleaz.com; tritz@glendaleaz.com; joe.schmitz@goodyearaz.gov; pmaslowski@litchfield-park.org; john.wesley@mesaaz.gov; Shawn.Kreuzwiesner@peoriaaz.gov; carol.johnson@phoenix.gov; cpadian@scottsdaleaz.gov; karen.savage@surpriseaz.gov; lisa_collins@tempe.gov; pmagallanez@tollesonaz.org; lharmer@buckeyeaz.gov; gary@carefree.org; icordwell@cavecreek.org; rturner@fh.az.gov; efitzer@gilabendaz.org; kyle.mieras@gilbertaz.gov; gturrubiarres@guadalupeaz.org; ecutro@paradisevalleyaz.gov; tcondit@queencreek.org; sboyle@ci.wickenburg.gov; lrobinson@youngtownaz.org; Richard Bohan - GRCX; Richard De Uriarte - PIOX; Brian Hushek - OMBX; Clem Ligocki - MCDOTX; Pete Weaver - EMERMGTX; Darren Gerard - PLANDEVX; RJ Cardin - PARKSX; Harry Courtright; John Werbach; darrenfrank@mail.maricopa.gov; jschweig@mail.maricopa.gov; John Kolman - ENVX; jtownsend@mail.maricopa.gov; Dennis Lindsey - FINX; Kenneth Proksa - AQDX; sdeppez@mpsaz.org; rdjeatj@mpsaz.org; sharon.matt@dvusd.org; lynda.johnson@dvusd.org; cnau@phxhs.k12.az.us; kbenson@susd.org; mcagle@liberty.k12.az.us; charles.schlinger@nau.edu; li.chen@dri.edu; Markus.Berli@dri.edu; SWaters@cals.arizona.edu; maddock@hwr.arizona.edu; bill.badger@asu.edu; miguel.medina@duke.edu; craig.sellers@yumacountyaz.gov; gmain@dnr.in.gov; info@valleyforward.org; sgilson@nafsma.org; mike.brilz@pulte.com; lorisdesk@aol.com; sgriffin@kbhome.com; banderson@kitchell.com; tfollmer@pedersoninc.com; sgervais@landadvisors.com; hrjames@drhorton.com; rhilgart@hilgartwilson.com; rawallace@pbsj.com; doug.himmelberger@derito.com; david.garcia@SheaHomes.com; tborgardt@fultonhomes.com; Kent@CooperAZ.com
Cc: Christopher Fazio - FCDX; Mike Wilson - PWX; Don Rerick - FCDX; Scott Vogel - FCDX; Gary Scott - PWX; Matthew Oller - FCDX; Doug Williams - FCDX; Patrick Schafer - FCDX; Mark Modin - MCDOTX; Denise Lacey - MCDOTX
Subject: Flood Control District of Maricopa County Partnering Outreach

Since 1959, the [Flood Control District of Maricopa County](#) has been a regional leader in flood control. The District's 2009 50-year anniversary strategic plan identified long-term goals focused on enhancing the District's ability to identify, remediate and regulate flooding hazards in Maricopa County. Among those is a goal of identifying opportunities for new and improved partnerships, with both private entities and other public agencies, to accomplish flood hazard mitigation. District staff has initiated an exploratory effort to address this goal.

Particularly in this economic climate, finding efficiencies through collaboration is essential to all of our organizations. Through this effort, the District hopes to find new and improved ways to establish mutual benefits through infrastructure, planning, technical and educational partnerships.

Our internal exploratory effort identified those addressed in this email as the best representatives of existing and potential future partner agencies. In the coming weeks, District staff will contact you to request your agencies' input. We may ask for your participation in working groups, interviews or surveys.

If you have questions in the interim, please contact me or Christopher Fazio at christopherfazio@mail.maricopa.gov, or 602-506-4489. Additionally, if your agency wishes to share its perspective but would like to offer an alternate point of contact, please let us know.

We appreciate your consideration and hope you are willing to donate your insight in this process.

Sincerely,

Timothy S. Phillips, P.E.
Chief Engineer and General Manager
Flood Control District of Maricopa County

C3FHMP Team Begins Effort to Improve Flood Hazard Mitigation Partnering

By Gant Wegner

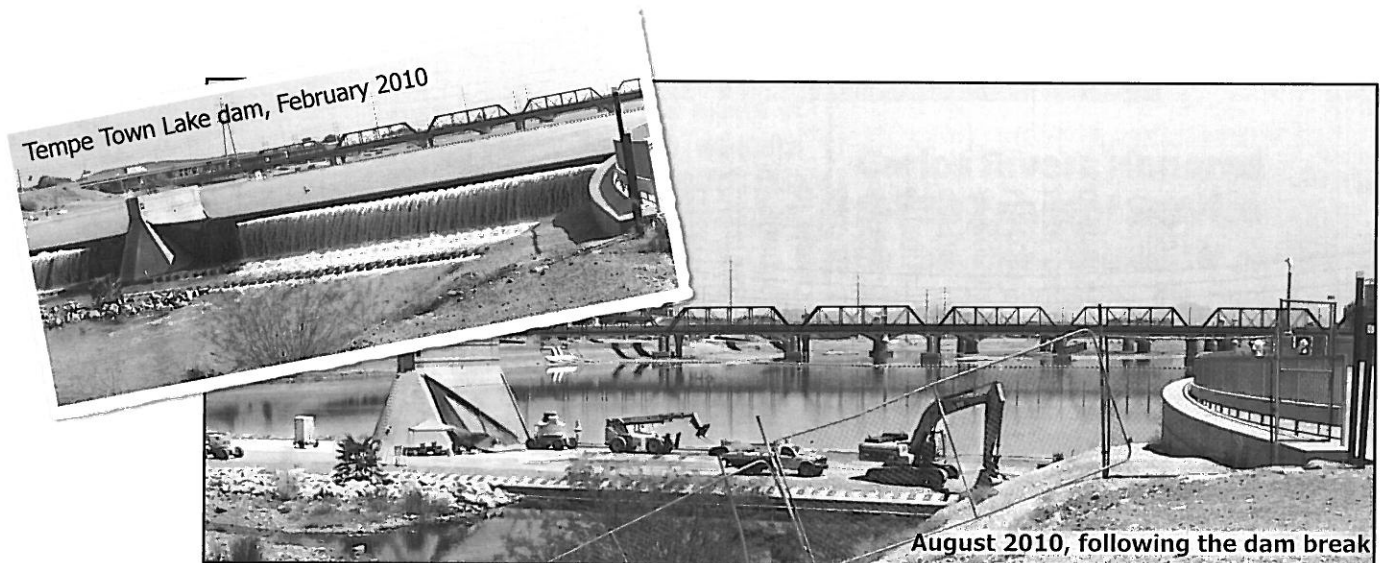
In the second iteration of the C3 process, the District has initiated its Coordinated, Comprehensive, Collaborative Flood Hazard Mitigation Partnering (C3FHMP) study effort. This effort addresses the Comprehensive Plan's Strategic Initiative No.3 to "Increase Collaboration and Partnering to Expand Flood Mitigation Efforts." C3FHMP seeks to determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual collaboration benefits between the District and public and private entities may be realized. Based on analyzing data collected from District staff and external stakeholders, the team of staff involved in the C3FHMP effort will make recommendations to improve the District's partnering efforts. Subsequently an implementation plan will be developed to execute the recommendations. Ultimately, the plan will help the District achieve its 2020 Goal of protecting all county residents and visitors from the devastating effects of regional flooding.

Sylvia Lopez is overseeing the efforts of the C3FHMP team. Christopher Fazio is managing the team, and Christine Jasinski, Patrick Schafer and Gant Wegner are handling the logistics, data analysis and communications, respectively. Beginning in September, other District staff will serve as task force leaders assigned with collecting the input of external stakeholder groups and formulating recommendations: non-client agencies (Scott Vogel), client cities' planning

departments (Doug Williams), client cities' capital project departments (Don Rerick), educational and technical entities (Matt Oller), other Maricopa County agencies (Mike Wilson), and the development community (Gary Scott). MCDOT staff will act as liaisons for the planning and capital projects groups.

The effort's first phase, the documentation of the District's current partnering policies and practices, was initiated in early August. District staff from a variety of disciplines were surveyed and interviewed to document the current partnering environment as it applies across all District activities. Staff members were asked to describe the District's current partnerships, explain constraints affecting the establishment or maintenance of partnerships, identify unexplored opportunities, and specify perceived weaknesses. Staff had much to say regarding partnering; numerous shared opinions and some important new concepts were related. The C3FHMP team thanks all those who took the time to participate in the interviews.

Beginning in September, the C3FHMP task force leaders will arrange interviews with the external stakeholder groups noted above to compile opinions from outside the District on current partnering efforts and future opportunities. This stakeholder data will be analyzed and evaluated alongside that from District staff to start building a consensus plan for the District's future flood hazard mitigation partnering activities.





Flood Control District of Maricopa County

Board of Directors
Fulton Brock, District 1
Don Stapley, District 2
Andrew Kunasek, District 3
Max Wilson, District 4
Mary Rose Wilcox, District 5

www.fcd.maricopa.gov

September 14, 2010

2801 West Durango Street
Phoenix, Arizona 85009
Phone: 602-506-1501
Fax: 602-506-4601
TT: 602-505-5897

Mr. David Cavazos
City Manager
City of Phoenix
200 W. Washington St., 12th Floor
Phoenix, AZ 85003

SAMPLE LETTER

Subj: Flood Control District Collaboration and Partnering Initiative

Mr. Cavazos:

Since 1959, the Flood Control District of Maricopa County (District) has been a regional leader in flood control. The District's 2009 50-year anniversary strategic plan identified long-term goals focused on enhancing the District's ability to identify, remediate and regulate flooding hazards in Maricopa County. Among those is a goal of identifying opportunities for new and improved partnerships, with both private entities and other public agencies, to accomplish flood hazard mitigation. District staff has initiated an exploratory effort to address this goal.

The input of both your engineering and planning departments related to the following questions is critical to this effort:

- What role should the District and its municipal partners assume in planning and constructing regional drainage infrastructure needed for new development, and what obligations should new development be expected to assume?
- How can the District's infrastructure planning best be synthesized with municipal planning efforts to minimize costs to the public?
- Where are the District's resources best applied: in constructing large regional projects, or in mitigating local flood hazards? What municipal cost share contributions can be expected?
- How can District and municipal technical resources be leveraged to find efficiencies of scale or quality improvements?

The District will host a working group on October 20, 2010 at 10:00 a.m. at 2801 West Durango Street, Phoenix, Arizona and requests representation from both your planning and engineering departments. We request that designated staff confirm their intent to attend by email to daw@mail.maricopa.gov by October 10, 2010. Attendees will be asked to participate in a group discussion, and to complete follow-on surveys representing the interests of their agencies. As this is an opportunity to ensure that your agency's preferences are understood by the District's staff as it forwards policy recommendations to its elected officials, attendance is highly encouraged.

Thank you for your time and consideration. If you have questions regarding this working group, please contact Don Rerick, P.E., at 602-506-4878, or Doug Williams, AICP, at 602-506-8743.

Sincerely,

A handwritten signature in black ink, appearing to read "T. S. Phillips".

Timothy S. Phillips, P.E.
Chief Engineer and General Manager



FLOOD HAZARD MITIGATION PARTNERING
Process Overview

August 16, 2010



COMPREHENSIVE PLAN: STRATEGIC INITIATIVES

1. Strengthen Role as Regional Leader
2. Expand Multi-Objective Watershed Approach to Flood Mitigation
3. INCREASE COLLABORATIONS AND PARTNERSHIPS
4. Preserve and Restore the Natural Resources and Functions of Floodplains and Riparian Areas
5. Continued Commitment to Process Improvement



TEAM GOAL

Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized, and develop an implementation plan to execute team recommendations.



SCOPE – PARTNERSHIPS WE'RE LOOKING FOR

1. With government agencies or non-contract private interests.
2. Formal or informal.
3. Financial or non-financial (collaborative).
4. Increase effectiveness or efficiency.
5. Not limited to capital projects.



PROCESS OVERVIEW

1. Internal review. Interview staff – define the current partnering environment, and identify known opportunities.
2. External review. Identify external approach – who are the stakeholders, and what do we need to ask? Obtain external input.
3. Evaluation. Assemble collective input, evaluate identified opportunities, and prioritize recommendations.
4. Implementation. Develop an implementation plan.





SUPPORT GROUP RESPONSIBILITIES

1. Sylvia Lopez – team leader.
2. Christopher Fazio – chief of staff.
3. Christine Jasinski – logistics/schedule.
4. Gant Wegner – communication.
5. Patrick Schafer – data analysis.



COMPLETED/ONGOING ACTIVITIES

1. Scope approved.
2. Conducted staff interviews.
3. Documented current environment.
4. Preparing for IPR to review results.



TASK FORCE LEADER GENERAL RESPONSIBILITIES

1. Organize your team.
2. Develop familiarity with current partnering environment and identified opportunities.
3. Develop stakeholder contact lists.
4. Participate in development of interview questions.
5. Schedule, plan and conduct panel discussions, interviews and surveys, and provide results to Patrick in electronic format.
6. Participate in the evaluation process; serve as the team expert on opportunities identified in the task force data collection effort.



NON-CLIENT AGENCIES

1. Contact list:
 - a) Federal agencies.
 - b) State agencies.
 - c) Indian communities.
 - d) Neighboring counties.
 - e) County lobbyist.
2. Fundamental concepts:
 - a) Collaboration for economy of scale.
 - b) Collaboration to leverage technical expertise.
 - c) Cost share for mutual flood control solutions.
 - d) Grants (particularly, Proposition 200 grants).





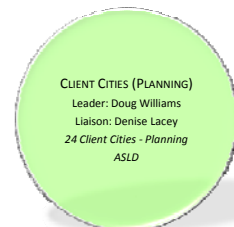
CITY/SCHOOL DISTRICT INFRASTRUCTURE

1. Contact list:
 - a) City engineers.
 - b) School district asst. superintendants (business services).
2. Fundamental concepts:
 - a) Cost share philosophy.
 - b) Scope of District project types (expand small projects, wash crossings, storm-water master plans).



CITY PLANNING

1. Contact list:
 - a) City planners/managers.
 - b) State land department.
2. Fundamental concepts:
 - a) Planning collaboration.
 - b) Public/private partnership approach – how can the District best effect drainage master plan implementation, with minimal public expenditures?





EDUCATION & TECHNOLOGY

1. Contact list:
 - a) Professional organizations.
 - b) Area universities.
 - c) Media outlets.
 - d) Libraries
 - e) School district asst. superintendants (curriculum).

2. Fundamental concepts:
 - a) Improving public education on flood hazards.
 - b) Technical partnerships.



DEVELOPMENT COMMUNITY

1. Contact list:

Area developers.

2. Fundamental concepts:

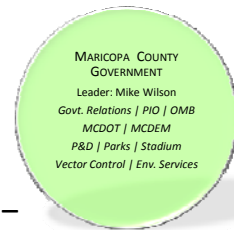
Public/private partnership approach – how can the District best effect drainage master plan implementation, with minimal public expenditures?





MARICOPA COUNTY GOVERNMENT

1. Contact list:
Relevant county departments.
2. Fundamental concepts:
 - a) Collaboration for economy of scale.
 - b) Public/private partnership approach –
how can the District best effect drainage
master plan implementation, with minimal public
expenditures?



SHORT-TERM TEAM ACTION

1. Identify task force members – meet as a task force to discuss C3FHMP concept.
2. Construct draft points of contact list – draft September 1st; final by September 20th.
3. Prepare to contribute to question development – discuss September 1st; final by September 20th.
4. In-progress review scheduled for September 7th: overview of current environment documentation and staff interview results – task force leaders should attend.



HOW WILL THE DATA COLLECTION PHASE WORK?

1. Pre-set questions.
2. Emphasis on personal contact...generally, interviews in person or by phone. Exception: workshops for city groups.
3. Will require advance scheduling.
4. Will be preceded by communication notifying contacts of C3FHMP process.



LONG-TERM KEY MILESTONES

1. All external stakeholder data to be collected during October...be ready to start schedule interviews/workshops at the end of September to allow for advance warning.
2. All collected data in electronic format by first week of November.
3. December 1: evaluation workshop...determine team recommendations.



MEETINGS / LOGISTICS

1. Will meet individually with each task force prior to data collection.
2. Bi-weekly meetings through data collection phase.
3. December 1: evaluation workshop, and team meeting to present team recommendations to CE/GM.
4. Intermittent meetings to develop implementation plan.
5. Charge time to 900.02.00 – Strat. Initiative Implementation



SHAREPOINT: [HTTP://PWINFO/FLOOD/C3FHMP](http://pwinfo/flood/c3fhmp)

Objective
The District's Coordinated, Comprehensive, Collaborative Flood Hazard Mitigation Partnering (C3 FHMP) study effort addresses the Comprehensive Plan's Strategic Initiative No. 3, "Increase Collaboration and Partnering". The C3 FHMP effort will determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized, and will develop an implementation plan to execute team recommendations.

Schedule

Phase	Milestone/Task	Status/Deadline
I. Research	Identify Objective	Complete
	Identify Rough Scope, Coarse Alternatives and Concepts	Complete
	Identify Gross Stakeholder Groups and Team Structure	Complete
	Stakeholder and Current Environment Identification	
	Develop Internal Interview Questions and Contact List	Complete
	Inform Internal Interview Candidates	Complete
	Document Concepts Being Applied & Terms	Complete
	Interview Internal Stakeholders	Complete
	Compile Data	Complete
	Determine Data Collection Approach	2010-08-11
II. External Communication	Develop External Stakeholder Questions (Stage III Implementation Begins)	2010-08-18
	7 HGT Team Kickoff Meeting	2010-08-18
	Internal Announcement C3 FHMP Kick-off (Prepare Open Channels Article)	Complete
	Document Current Environment, Issues, Possibilities, Strengths, Weaknesses, Terms	Complete
	7 HGT Internal Data Collection Review - Validate/Modify Approach (IR1)	2010-09-07
	Define Roles, Responsibilities and Deliverables	Complete
	Identify External Stakeholder Points of Contact	2010-09-15
	External Communication	
	Provide External Organizations with Scope and Objective	2010-09-30
	Arrange Interviews with External Stakeholders	2010-09-30

Document Libraries

1. General Documents
2. Agendas/Minutes
3. Current Environment
4. Run-Client Agencies
5. CEIS: Infrastructure
6. CEIS: Planning Group
7. Developers
8. Maricopa County
9. Education & Technology



C3 FHMP

Flood Hazard Mitigation Partnerships

Coordinated | Comprehensive | Collaborative

Christopher Fazio



Purpose of this IPR

1. Brief overview of C3 FHMP goal and process
2. Generalized review of internal data collection results
3. Review external collection approach
 - a) Review contact list for each task force leader
 - b) Provide opportunity for task force leaders to seek additional information on staff-noted opportunities related to their task forces
 - c) Provide opportunity for respondents to highlight key concepts



Background: Team Goal

Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized, and develop an implementation plan to execute team recommendations.



Background: Process Overview

1. Rough scoping.
2. Internal data collection & scope finalization.
3. External data collection.
4. Evaluation.
5. Implementation planning.



Internal Data Collection

Generalized Results



Internal Review: Staff Survey

1. Note non-routine partnerships the District has participated in.
2. Note real or contrived constraints limiting the District's partnerships.
3. Note opportunities for new beneficial inter-agency or inter-departmental partnerships.
4. Note opportunities for beneficial public-private partnerships.
5. Identify clear weaknesses in current practices.



General Survey Results Existing Partnerships

Public Information & Education: public service announcements with media, public-information supporting projects, school presentations.

Flood Warning: installation and maintenance of ALERT stations, road flooding notifications, flood response plans.

Floodplain Management: 12 communities, NFIP, CRS, state standards group, One-Stop Shop, FEMA CTP, delineation stakeholders.

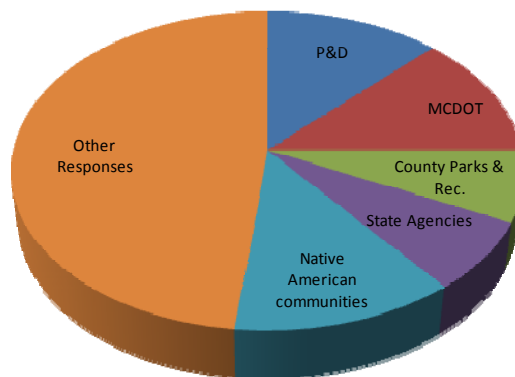
Capital Projects: local and federal agreements for regional projects, Small Projects Assistance Program, stakeholder involvement.

Planning: stakeholder coordination, some cost share.

O&M / Dam Safety / Real Estate: EAP stakeholders, maintenance partnerships, recreational use agreements.

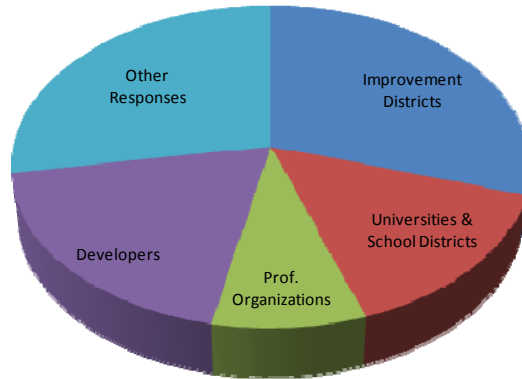


General Survey Results Public Partnership Opportunities

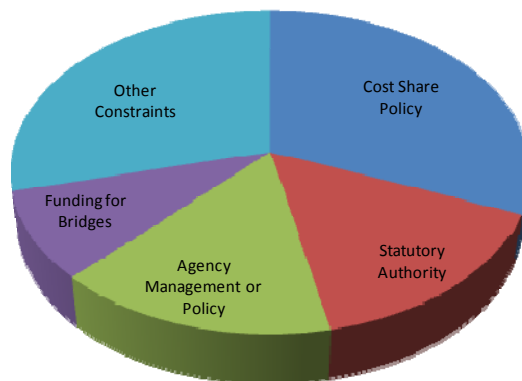




General Survey Results Private Partnership Opportunities



General Survey Results Constraints





Detailed Survey Results

Home - C3FHMP Strategic Initiative - Windows Internet Explorer

http://pwin/flood/C3FHMP/default.aspx

Home - C3FHMP Strategic Initiative

Public Works > Currents

Welcome Christopher Fazio - FCDX | My Site | My Links

C3FHMP Strategic Initiative

Currents > Document Center > Divisions > Projects > Collaboration > Strategic Initiatives > Committees > Search

All Sites

Advanced Search

Site Actions

View All Site Content

Recycle Bin

Currents > C3FHMP Strategic Initiative

C3 Flood Hazard Mitigation Partnering

Objective

The District's Coordinated, Comprehensive, Collaborative Flood Hazard Mitigation Partnering (C3 FHMP) study effort addresses the Comprehensive Plan's Strategic Initiative No.3, "Increase Collaboration and Partnering". The C3 FHMP effort will determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized, and will develop an implementation plan to execute team recommendations.

Schedule

Phase	Milestone/Task	Status/Deadline
I Preparation	Identify Objective	Complete
	Identify Rough Scope, Coarse Alternatives and Concepts	Complete
	Identify Gross Stakeholder Groups and Team Structure	Complete
II Shaping and Current Environment Identification	Develop Internal Interview Questions and Contact List	Complete
	Inform Internal Interview Candidates	Complete
	Document Concepts Being Applied & Terms	Complete
	Interview Internal Stakeholders	Complete

Document Libraries

1. General Documents
2. Agendas/Minutes
3. Current Environment
4. Non-Client Agencies
5. Cities: Infrastructure
6. Cities: Planning Group
7. Developers
8. Maricopa County
9. Education & Technology



External Data Collection Contact List & Identified Opportunities



External Input General Questions

1. What are our common goals?
2. What partnerships are you engaged with us on now? Tell us how we're doing.
3. What opportunities exist for additional partnerships? Tell us what you think of those opportunities.



External Input Non-Client Agencies (1/6)

Agencies to contact:

1. Neighboring counties
2. Neighboring Indian communities
3. USACE
4. FEMA
5. NRCS
6. ADOT
7. ADEM
8. ADWR
9. AZ/US G&F (ADDED)
10. Other leading flood control districts (ADDED)
11. County Lobbyist



External Input Non-Client Agencies (1/6)

Opportunities noted by District staff:

1. Technical partnerships – other leading flood control districts, federal and state agencies
2. ADMS/P partnerships – neighboring communities
3. Material excavation/disposition – ADOT
4. ALERT system gage & data sharing partnerships
5. River/wash crossing structures – ADOT
6. Proposition 200 Gaming Grants – Indian Communities
7. Modifications/improvements to existing capital project relationships – ADOT/NRCS/USACE
8. Rights-of-entry for policing – AZ Game & Fish



External Input City Capital Projects (2/6)

Agencies to contact:

1. 24 cities in Maricopa County (City Engineers)
2. School Districts (Business Administrators)



External Input City Capital Projects (2/6)

Opportunities noted by District staff:

1. Public/private partnership implementation.
2. ALERT system gage & data sharing partnerships (including schools).
3. River/wash crossing structures (including schools).
4. Multiuse (including retrofit of existing parks, school facilities).
5. Relaxation of cost share practices.
6. Increased emphasis on small projects.
7. River restoration.
8. Improved enforcement of IGA maintenance provisions.
9. Shift practice to encourage District maintenance of facilities.
10. Provide technical assistance (levee certification, erosion hazards).



External Input City Planning (3/6)

Agencies to contact:

1. 24 cities in Maricopa County (City Planners/Managers)
2. Arizona State Land Department



External Input City Planning (3/6)

Opportunities noted by District staff:

1. Public/private partnership implementation
2. Increased emphasis on ADMP adoption by cities



External Input Education & Technology (4/6)

Agencies to contact:

1. Universities (ASU, UofA, NAU, UNM, UNLV, UT Austin) (ADDED)
2. Professional Organizations (APA, NAFSMA, ASCE, ASLA) (ADDED)
3. School Districts (Curriculum Administrators) (ADDED)
4. Media Outlets (ADDED)
5. Libraries (ADDED)



External Input Education & Technology (4/6)

Opportunities noted by District staff:

1. Applied research and development – Universities.
2. Education programs – School Districts, Media, Libraries.
3. Technical resource sharing/professional development – Professional Organizations.



External Input County Agencies (5/6)

Agencies to contact:

1. P&D
2. OMB
3. MCDOT
4. Finance (Real Estate)
5. Parks
6. Stadium
7. PIO
8. Environmental Services
9. Vector Control (ADDED)
10. Emergency Management
11. Government Relations



External Input County Agencies (5/6)

Opportunities noted by District staff:

1. Public/private partnership implementation – P&D, OMB
2. ADMP adoption – P&D
3. River/wash crossing structures & ALERT data sharing – MCDOT
4. Multiuse and volunteer stewardship programs – Parks.
5. Educational partnerships – PIO, Stadium.
6. "Field partnerships" – Environmental Services, Vector Control.
7. Administrative partnerships – Finance (Real Estate)
8. Training – MCDOT, Environmental Services, P&D
9. Additional coordination – Emergency Management, Government Relations, P&D (permitting)



External Input Developers (6/6)

Agencies to contact:

1. Representative selection of area developers



External Input Developers (6/6)

Opportunities noted by District staff:

1. Implementation of ADMP infrastructure by development
2. Planning partnerships
3. Implementation of ADMP infrastructure through public/private partnerships or private funding contributions



Post-Data Collection Summary of Process



Post-Data Collection Process

1. Establish master list of identified opportunities
2. Evaluate opportunities given criteria that would make opportunity worth pursuing to the District...identify whether opportunity is a betterment or detriment in that area (ex: quality, efficiency, cost)
3. Based on evaluation criteria, prioritize opportunities for implementation.

Additionally, mine "report card" data.



Flood Control Advisory Board
September 22, 2010
Agenda Item 7

C3 FHMP

Flood Hazard Mitigation Partnering

Coordinated | Comprehensive | Collaborative

Christopher Fazio

Education | Identification | Regulation | Remediation



Background

Initiative: Increase collaboration and partnering.

Goal: Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized.

Desired End State: Reduced cost and/or increased effectiveness achieved through partnering.

Education | Identification | Regulation | Remediation



Scope: What Potential Partnerships May Include

1. With government agencies or private interests.
2. Formal or informal.
3. Financial or non-financial (collaborative).
4. Increase effectiveness or efficiency.
5. Not limited to capital projects.



Education | Identification | Regulation | Remediation



Process Overview

1. Scoping & Internal data collection.
2. External data collection.
3. Evaluation.
4. Implementation planning.

Education | Identification | Regulation | Remediation



Internal Data Collection

Generalized Results

Education | Identification | Regulation | Remediation



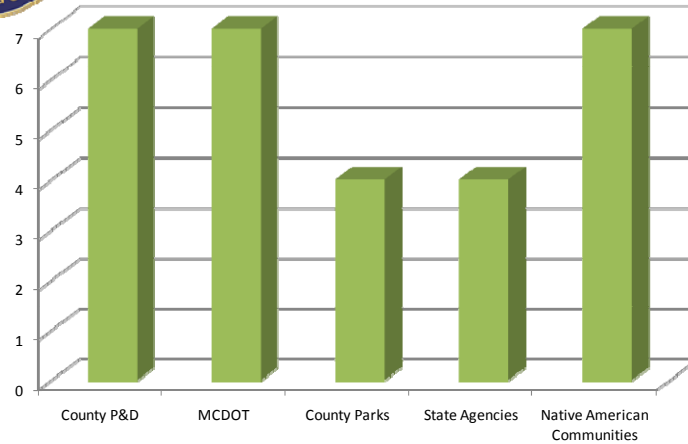
Internal Review: Staff Survey

1. Note non-routine partnerships the District has participated in.
2. Note real or contrived constraints limiting the District's partnerships.
3. Note opportunities for new beneficial inter-agency or inter-departmental partnerships.
4. Note opportunities for beneficial public-private partnerships.
5. Identify clear weaknesses in current practices.

Education | Identification | Regulation | Remediation



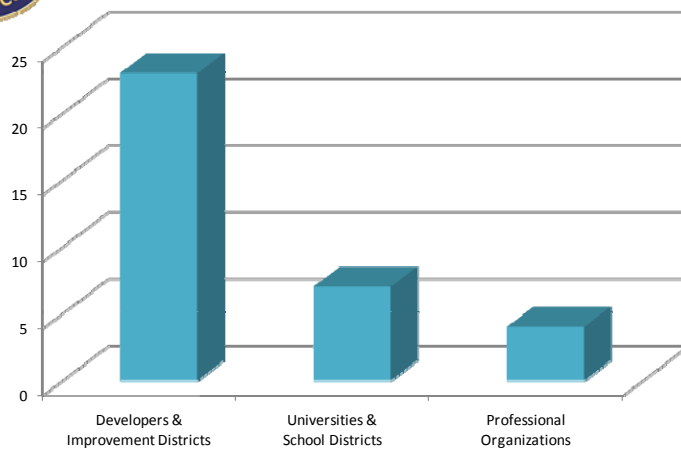
General Survey Results Top Public Partnership Opportunities



Education | Identification | Regulation | Remediation



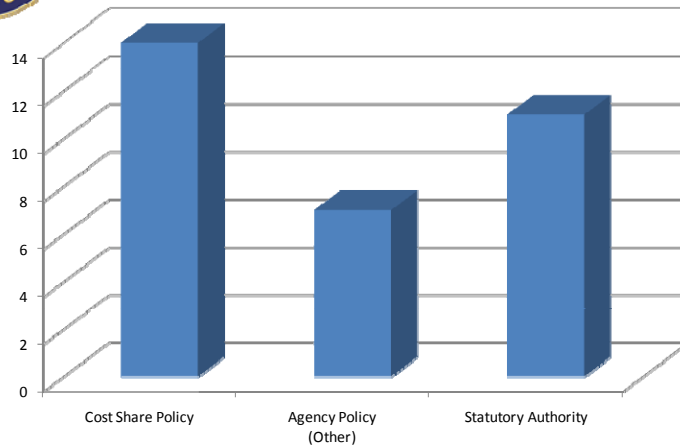
General Survey Results Top Private Partnership Opportunities



Education | Identification | Regulation | Remediation



General Survey Results Top Constraints



Education | Identification | Regulation | Remediation



External Data Collection Questions and Contact List

Education | Identification | Regulation | Remediation



External Input General Questions

1. What are our common goals?
2. What partnerships are you engaged with us on now? Tell us how we're doing.
3. What opportunities exist for additional partnerships? Tell us what you think of those opportunities.



Education | Identification | Regulation | Remediation



External Input Contact List

1. Federal/State Agencies
2. Leading Flood Control Districts
3. Other Maricopa County Departments
4. Neighboring Counties & Native American Communities
5. Cities: Engineering and Planning
6. Schools and Universities
7. Developers
8. Professional Organizations

Education | Identification | Regulation | Remediation



Post-Data Collection

Summary of Process

Education | Identification | Regulation | Remediation



Post-Data Collection Process

1. Establish master list of identified opportunities.
2. Evaluate opportunities given criteria that would make opportunity worth pursuing to the District...identify whether opportunity is a betterment or detriment in that area (ex: quality, efficiency, cost).
3. Based on evaluation criteria, prioritize opportunities for implementation.

Additionally, mine "report card" data.

Education | Identification | Regulation | Remediation



Schedule

JUL 2010	Rough Scoping
AUG 2010	Internal Data Collection
SEP 2010	External Approach Development
OCT 2010	External Data Collection
NOV 2010	Data Analysis
DEC 2010	Evaluation / Recommendations
JAN 2011 - ?	Approval / Implementation Planning Coordination

Education | Identification | Regulation | Remediation



Recap

Initiative: Increase collaboration and partnering.

Goal: Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized.

Desired End State: Reduced cost and/or increased effectiveness achieved through partnering.

Education | Identification | Regulation | Remediation



FLOOD HAZARD MITIGATION PARTNERING
External Data Collection Summary

November 29, 2010



ACTION FOR TODAY'S WORKGROUP

1. Agenda/goal review – 8:30 to 8:35
2. Review report card data & identify action items – 8:35 to 9:30
3. Review identified partnership opportunities – 9:30 to 10:20
4. Break – 10:20 to 10:30
5. Review identified partnership opportunities – 10:30 to 11:45
6. Break – 11:45 to 12:15
7. Evaluate opportunities (individual exercise) – 12:15 to 2:30
8. Review results & identify follow-up items if applicable – 2:30 to 3:30



TEAM GOAL

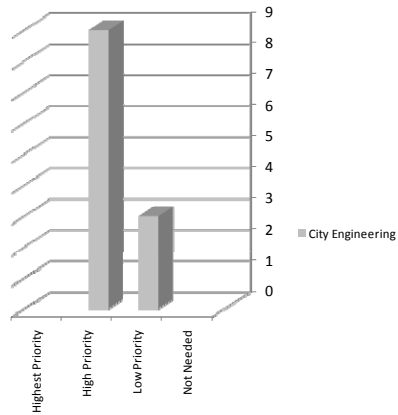
Determine how the funding and resources of other entities can be best applied to mitigate flood hazards in Maricopa County or where mutual benefits may be realized, and develop an implementation plan to execute team recommendations.



REPORT CARD DATA

C3 FHMP

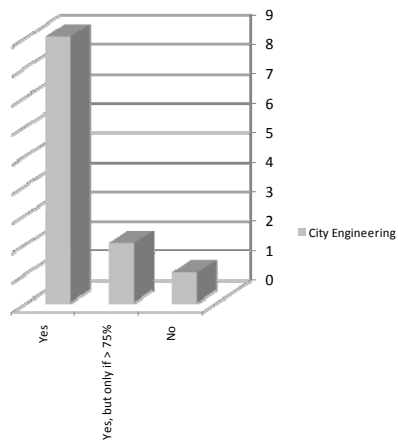
WHICH OF THE FOLLOWING MOST ACCURATELY EXPRESSES THE PRIORITY OF FLOOD CONTROL CAPITAL PROJECTS IN YOUR CITY (RELATIVE TO OTHER INFRASTRUCTURE)?



1. Low priority: Mesa, Goodyear, Gilbert.
2. Mesa indicates that priority increases following heavy storm seasons.

C3 FHMP

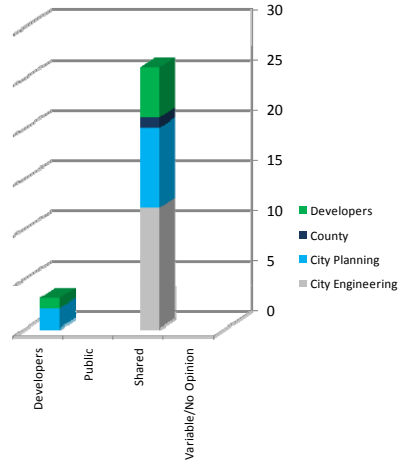
WOULD INCREASED DISTRICT COST SHARE INCREASE THE IMPLEMENTATION OPPORTUNITIES FOR FLOOD CONTROL CAPITAL PROJECTS IN YOUR CITY?



1. No: SRP.
2. Only if > 75%: Paradise Valley, Goodyear.



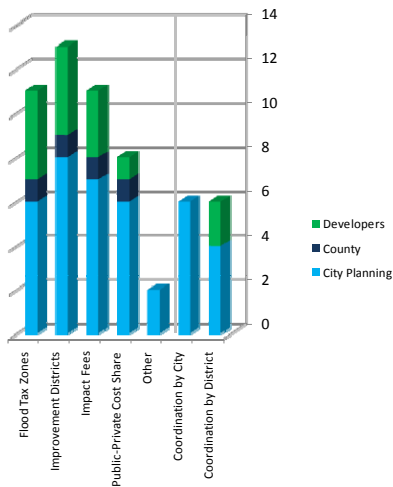
WHAT IS YOUR AGENCY'S POSITION ON THE FOLLOWING: HOW SHOULD REGIONAL INFRASTRUCTURE FOR FUTURE DEVELOPMENT BE FUNDED?



1. County response from P&D.
2. Require developers to fund: Goodyear, Avondale.
3. One developer response: work with developers, and assess impact fees – responded both “share costs” and “developer fund”.
4. One developer: 70% public, 30% private.



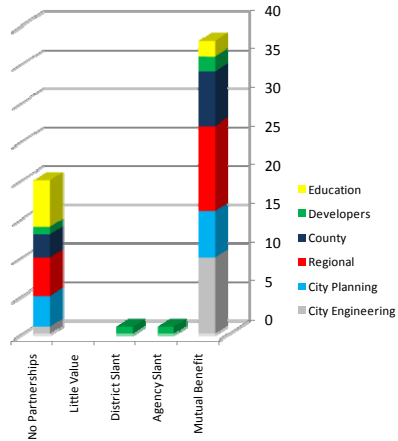
WHAT IS YOUR AGENCY'S POSITION ON THE FOLLOWING: HOW SHOULD DEVELOPERS' FUNDING BE ATTAINED (IF APPLICABLE), AND WHICH AGENCY SHOULD COORDINATE?



1. One developer: tax zones – impact fees would be complicated for regional flood control infrastructure.
Other: development agreements
2. District collect: Phoenix, Glendale, Gilbert, one developer
City collect: Avondale, Goodyear, Surprise, Tempe, Paradise Valley
Variable: Peoria, one developer



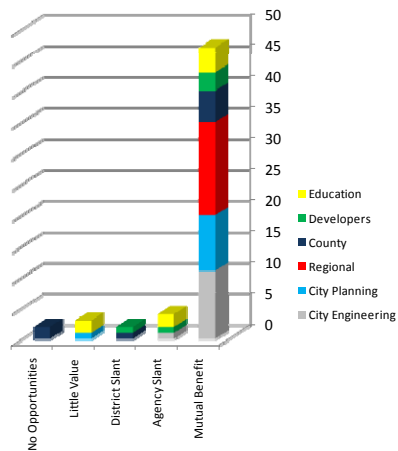
WHICH OF THE FOLLOWING DO YOU BELIEVE BEST EXPRESSES THE EXISTING PARTNERSHIPS BETWEEN YOUR AGENCY AND THE DISTRICT?



1. Overall, few “skewed” partnerships.
2. Partnering w/ city engineering. (“No”: Youngtown)
3. City planning mixed. (“No”: Phoenix, Mesa, Gilbert, Peoria)
4. Few partnerships w/ other FCDs.
5. County mixed. (MCDOT: at times, District benefits more)
6. Developers mixed.
7. Few partnerships w/ schools & univs.



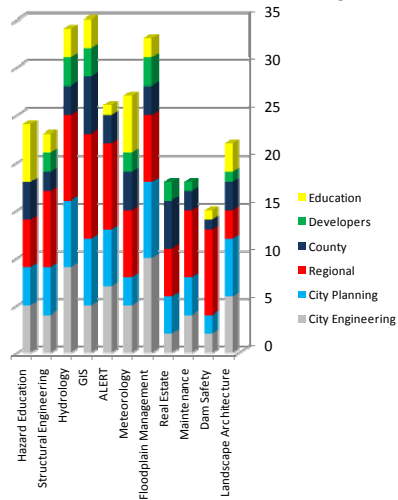
WHICH OF THE FOLLOWING DO YOU BELIEVE BEST EXPRESSES THE OPPORTUNITY FOR PARTNERSHIPS BETWEEN YOUR AGENCY AND THE DISTRICT?



1. Most city planners see opportunities. (=underutilized?) (“Little value”: Mesa)
2. FCDs/counties see opportunities. (=underutilized?)
3. Universities see opportunities. (=underutilized?)
4. County P&D: “No opportunities.”
5. Developers mixed.
6. Schools mixed.



WHICH OF THE FOLLOWING DISTRICT RESOURCES WOULD BE MOST VALUABLE TO YOUR AGENCY?



1. Planners & city engineering: floodplain management, H&H.
Next for engineering: flood warning.
Next for planning: GIS.
2. Regional & Maricopa County: GIS.
3. Developers: H&H, floodplain mgt, GIS.
4. Schools: hazard education.
5. Universities: GIS, meteorology.



IDENTIFIED OPPORTUNITIES



PLANNING PARTNERSHIPS
30 MINUTES

1. Develop partnerships w/ NRCS for joint development/funding/implementation of District ADMS/Ps to obtain federal funding.
2. Develop partnerships w/ Indian communities for joint dev./funding/implementation of District ADMS/Ps to obtain tribal funding and increase system efficiency.
3. Develop partnerships w/ ASLD for joint development/funding/implementation of District ADMS/Ps to increase developer implementation and increase sys. efficiency.
4. Develop partnerships w/ neighboring counties for joint dev./funding/implementation of District ADMS/Ps to obtain inter-county funding and increase system efficiency.
5. Develop partnerships w/ Maricopa County P&D for joint adoption of & coordination on District ADMS/Ps to increase developer implementation.
6. Emphasize partnerships w/ Maricopa County DOT for coordination on District ADMS/Ps and MCDOT planning to increase alignment of District CIP and MCDOT TIP.
7. Emphasize partnerships w/ city planning depts. for joint adoption of & coordination on District ADMS/Ps to increase developer implementation.
8. Emphasize partnerships w/ city planning depts. for increased District stakeholder involvement in city general plan development to increase coordination and efficiency.
9. Develop partnerships w/ cities for joint development/funding/implementation of city habitat/wildlife/recreation/trail plans to increase multiuse opportunities.
10. Emphasize partnerships w/ developers for planning, design and construction timing coordination to improve efficiency.
11. Emphasize partnerships w/ conservation & wildlife groups for planning to leverage biological and environmental expertise.
12. Emphasize partnerships w/ ADOT for increased material excavation and disposition coordination to reduce construction costs.



CAPITAL PROJECT PARTNERSHIPS
20 MINUTES

13. Emphasize partnerships w/ cities for small projects by increasing small project program capacity to better address local flooding hazards.
14. Emphasize partnerships w/ cities for regional projects by increasing maximum District cost share to better address regional flooding hazards.
15. Emphasize partnerships w/ cities for regional projects by increasing consideration for in-kind cost share contributions.
16. Develop partnerships w/ cities for protection of roadways from regional flooding hazards to reduce flooding hazards to the traveling public.
17. Develop partnerships w/ cities and MCDOT for construction of flood control culverts required for projects to ultimate road width to reduce long-term public expenditures.
18. Develop partnerships w/ cities for multiuse/aesthetic retrofit of existing flood control structures and/or floodplains to increase multiuse opportunities.
19. Develop partnership w/ cities for investigation of stormwater utility programs to increase cities' ability to participate financially in flood control projects.
20. Develop program to pursue Prop 201 Indian Gaming Grants to obtain tribal funding for flood control projects.
21. Develop partnerships w/ developers/cities/county for forming tax zones/CFDs/impact fees to reduce public contribution in funding regional infrastructure.



FLOOD WARNING PARTNERSHIPS
5 MINUTES

22. Emphasize partnerships w/ cities/other agencies for installing & operating ALERT gages to increase ALERT system effectiveness.
23. Emphasize partnerships w/ cities/other agencies for distribution of ALERT system data to increase ALERT system effectiveness.



TECHNICAL/EDUCATIONAL PARTNERSHIPS
30 MINUTES

23. Develop partnerships w/ regional entities/county agencies/cities/developers/others for GIS data-sharing to increase data availability and operational efficiency.
24. Develop partnership w/ other FCDs for periodic regional flood control meetings to increase regional flood control technical expertise and coordination.
25. Develop partnership w/ cities for periodic countywide flood control meetings to increase countywide flood control technical expertise and coordination.
26. Develop partnership w/ cities for District preparation of city 404 permit applications to leverage District expertise and reduce burden on cities.
27. Develop partnership w/ AZGFD for exchange of resources and services (GIS, biological, dam safety, patrol, restoration) to leverage individual areas of expertise.
28. Emphasize partnerships w/ universities (& Desert Research Institute) to increase District technical skills and capabilities.
29. Develop partnerships w/ professional organizations to increase District technical skills and capabilities.
30. Develop partnerships w/ cities/schools/conservation groups for Adopt-a-River program to reduce river maint. costs, increase river aesthetics and educate citizens.
31. Develop partnerships w/ cities for executive education program to increase governing bodies' understanding of flooding hazards and importance of mitigation.
32. Emphasize partnerships w/ schools for hydrology/flood hazard curriculum to increase flood hazard education program effectiveness.
33. Emphasize partnerships w/ community groups for flood hazard education to increase education program effectiveness.
34. Develop partnership w/ UofA Coop. Ext. to insert floodplain management curriculum in Watershed Steward program to develop network of citizen stewards.



REGULATORY PARTNERSHIPS
10 MINUTES

35. Develop partnership w/ Maricopa County P&D for cooperative regulatory inspection process to encourage economy of scale and consistency.
36. Emphasize partnerships w/ cities for permitting coordination to increase effectiveness and increase consistency where desired.
37. Emphasize partnerships w/ cities for non-structural mitigation solutions by providing District funding to increase implementation effectiveness.
38. Develop partnership w/ cities for voluntary uniformity of floodplain regulations and interpretations to increase consistency where desired.



MAINTENANCE PARTNERSHIPS
20 MINUTES

40. Develop partnership w/ cities for District inheritance of maintenance responsibilities on major new regional structures to ensure standards are met.
41. Develop partnership w/ cities for District inheritance of maintenance responsibilities on major existing regional structures to ensure standards are met.
42. Emphasize partnerships w/ cities for O&M field cross-training to increase efficiency and ensure standards are met.
43. Develop program to pursue USFWS Partners for Wildlife grants to increase ancillary benefit associated with District land.
44. Develop partnership w/ AZGFD for patrol of District land to reduce illegal activities and protect habitat.
45. Develop partnership w/ ADEM for District/County participation in Statewide Mutual Aid Agreement to increase emergency resource availability (& contribution).
46. Develop partnership w/ MCDem for District donation of emergency response equipment to increase countywide emergency response capabilities.



OTHER PARTNERSHIPS
10 MINUTES

47. Develop partnership w/ Stadium District for use of District Landscape/Aesthetic services to increase District revenue.
48. Develop partnership w/ cities and other agencies including links on District public web site to other-agency flood control contract advertisements to increase bid competition.
49. Develop partnership w/ neighboring counties for legislative coordination to cooperatively advance mutually-desirable agendas.
50. Emphasize partnership w/ Maricopa County Government Relations to improve lobbying effectiveness and increase likelihood of federal funding.

Additional item: Suggestion to promote bonds...defer for follow-on exploration?



LUNCH & EVALUATION EXERCISE
RESUME AT 2:30



VIII. DETAILED REPORT OF RESULTS

Detailed Flood Hazard Mitigation Partnering Evaluation Results

Consensus Priority		Raw Weighted Score								Evaluated Opportunity and Outcome (Highlight Represents Action Recommendation)										Strategic Program	Required interagency Communication										Divisions Involved (Lead Now = Red, Later = Orange)					Formal Action				
Quality	Cost Reduction	Ancillary Benefit	Simplicity	Economic Impact	Staff Impact	USACE	NRCS	US EPA	USFWS	Indian Comms.	ADOT	AZ GFD	ASLD	Regional FCDs	AZ Counties	MC P&D	MCDOT	MCDEM	MC Govt. Rel.		Cities	Universities	Schools	Developers	Comm. Groups	Prof. Orgs.	Chief Engineer	PPM	Engineering	FMS	O&M	Real Estate	GIS	PIO	Administration	General Counsel	Change Statute	New BOD Policy	Change BOD Policy	New Staff Policy
Public Information & Education Partnerships																																								
1	23	1	1	2	(1)	1	(1)	Develop partnerships with cities/schools/conservation groups for Adopt-a-River program to reduce river maint. costs, increase river aesthetics and educate citizens. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support. Note: unanimous.										Educ																						
1	8	1	0	1	0	0	(1)	Develop partnerships with cities for executive education program to increase governing bodies' understanding of flooding hazards and importance of mitigation. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.										Educ																						
1	8	1	0	1	0	0	(1)	Emphasize partnerships with community groups for flood hazard education to increase education program effectiveness. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.										Educ																						
4	8	1	0	1	0	0	(1)	Emphasize education partnerships with schools to increase flood hazard education program effectiveness. Conditionally recommended. Collectively, pursuing educational partnership opportunities would likely require additional staff to support.										Educ																						
5	4	1	(1)	1	0	0	0	Investigate partnership with UofA Cooperative Extension to insert floodplain management curriculum in Watershed Steward program to develop network of citizen stewards. Conditionally recommended. Need more information regarding program prior to recommending action or lack of action.										Educ																						
Regulatory Partnerships																																								
1	21	1	0	1	0	1	0	Develop partnership with Maricopa County P&D for cooperative regulatory inspection process to encourage economy of scale and consistency. Recommended with comment. Implementation difficulty noted. Note: unanimous.										Regln																						
2	18	1	0	1	0	1	0	Emphasize partnerships with cities for permitting coordination to increase effectiveness and increase consistency where desired. Recommended with comment. Implementation difficulty noted. Note: unanimous.										Regln																						
3	12	1	0	1	(1)	1	(1)	Develop partnership with cities for voluntary uniformity of floodplain regulations and interpretations to increase consistency where desired. Conditionally recommended. Limit staff time invested; benefit is not substantial enough to justify major staff effort.										Regln																						
Operations & Maintenance Partnerships																																								
1	20	1	0	1	0	1	(1)	Emphasize partnerships with cities for O&M field cross-training to increase efficiency and ensure standards are met. Recommended with comment. Effectiveness may vary depending on resources of other agency and ability to execute. Note: unanimous.										Remed																						
2	12	1	(1)	1	0	1	(1)	Develop partnership with cities for District inheritance of ownership and maintenance responsibilities, where appropriate, on major new regional structures to ensure standards are met. Conditionally recommended. Policy required; only assume O&M where other agency wouldn't be more efficient (e.g., adjacent to roadway, park amenities etc.); ensure staff, equipment, facilities added to compensate.										Remed																						
3	7	1	(1)	1	0	0	(1)	Develop partnership with cities for District inheritance of O&M responsibilities on major existing regional structures to ensure standards are met in exchange for compensation. Conditionally recommended. Case-by-case consideration with limited applications; ensure staff, equipment, facilities added to compensate.										Remed																						
4	7	0	0	1	0	1	0	Develop partnership with MCDEM for use of District emergency response equipment to increase countywide emergency response capabilities. Conditionally recommended. Ensure operator follows equipment to avoid damage; dam safety needs must supersede other emergency needs.										Ancillary																						
5	10	0	1	1	(1)	1	(1)	Develop program to pursue USFWS Partners for Wildlife grants to increase ancillary benefit associated with District land. Conditionally recommended. Need more information regarding program prior to recommending action; what strings involved?										Ancillary																						
NA	(6)	0	0	1	(1)	0	0	Develop partnership with AZGFD for patrol of District land to reduce illegal activities and protect habitat. Not recommended. Potential for mission conflict; enforcement value of AZGFD personnel uncertain.																																
NA	(9)	0	(1)	0	(1)	0	(1)	Develop partnership with ADEM for District/County participation in Statewide Mutual Aid Agreement to increase emergency resource availability (and contribution). Not recommended. District/County would likely primarily act as donor agency.																																
Other Partnerships																																								
1	13	0	0	1	0	1	0	Develop partnership with cities and other agencies including links on District public web site to other-agency flood control contract advertisements to increase bid competition. Recommended with comment. Staff time involved may be more substantial than is apparent.										Various																						
1	15	1	0	1	(1)	0	(1)	Develop partnership with neighboring counties for legislative coordination to cooperatively advance mutually-desirable agendas. Recommended. Note: unanimous.										Various																						
2	12	1	0	1	0	1	0	Emphasize partnership with Maricopa County Government Relations to improve lobbying effectiveness and increase likelihood of federal funding. Recommended with comment. Recognize strings attached to federal funding; recognize opportunities track with political environment.										Remed																						
NA	(1)	0	0	0	0	1	(1)	Develop partnership with Stadium District for use of District Landscape/Aesthetic services to increase District revenue. Not recommended. Potential for excessive use of District staff, detracting from primary staff mission.																																
										Count		5 7 2 9 7 5 8 2 2 10 8 9 3 5 29 5 5 8 3 3												11 16 8 7 8 2 6 2 1 8					1 3 2 5 0											
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