

Section H. Project Integration and Alternatives

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Section H. Project Integration and Alternatives

The IRWM Plan includes a framework for project integration as recommended in 2012 CDWR IRWM Guidelines. Given the inherent nature of the integrated planning process at the forefront of this document's purpose, much of the integration at policy levels is already taking place and is described in various sections of the Plan Update (refer to Appendix Q for a list of those locations). The primary focus of this section is to touch on the meaning of integration for the IRWM region and how, at the project implementation level, integration is being addressed.

An IRWM Plan must contain structures and processes that provide opportunities to develop and foster integration. The intent of the Integration Standard is to ensure that RWMGs intentionally create a system where integration [at many levels] can occur...integration is combining separate pieces into an efficiently functioning unit. (DWR, 2012)

H.1 ADVANTAGES OF THE REGIONAL PLAN AS OPPOSED TO INDIVIDUAL LOCAL EFFORTS

As an integrated regional plan, the word "integrated" describes the IRWM Region Stakeholder's efficient use of local resources through collaborative and coordinated efforts and shared resources. As a "regional integrated" plan, as opposed to individual local efforts, many more strategic options become available to solve water resource management issues. Multi-agency regional projects can serve multiple communities more efficiently, at a lower cost (i.e. economies of scale), and can achieve broader public support than can be achieved through smaller, localized efforts. Access to technical support and sources of funding from federal and state agencies is more effective using a regional plan supported by a regional partnership of local agencies. Additionally, implementing specific programs that integrate projects to collectively achieve the IRWMP Goals and Objectives will ultimately be more beneficial to the watershed as a whole.

The IRWMP process provides a forum for sharing experience, insights, and knowledge among agencies and for developing solutions that can be effectively implemented at a regional and inter-regional scale. Regional integrated planning is advantageous for issues that span the region and cross jurisdictional boundaries within and outside the IRWM planning region.

There are many issues in the watershed that can only be effectively addressed through a coordinated regional planning approach. For example, an effective flood management solution

requires consideration of activities by multiple agencies in both the upper and lower portions of the river. Addressing water quality issues such as TMDLs involves concerted efforts to control point source and non-point source pollution by agencies, cities, and counties. Surface water reservoirs can be operated to achieve maximum benefit only by understanding the needs and considerations of all downstream users.

There are also many water management related contrasts that exist between different areas of the region. This presents opportunities for regional planning to integrate efforts and utilize the attributes of one area to address deficiencies existing in another. Finally, an integrated regional planning process allows agencies planning single purpose projects to work together and combine efforts to develop multi-objective solutions, or to examine projects for potential enhancements that can address additional issues simultaneously within one project.

Examples include tying two similar projects or programs together making larger, more robust projects or programs for the region, and gaining the needed recognition by county, state and federal agencies.

Thus far, the IRWMP process has identified high priority projects, considered them in the context of regional objectives, and assembled them into Project Elements that are representative of a synergistic approach. Relationships and connections between stakeholders that were not apparent previously, are enabled through the regional planning process by aligning the Project Elements and looking for similarities. From a coordination standpoint, the IRWMP process builds relationships and understandings that will be invaluable for working out future issues.

H.2 PROJECT INTEGRATION AND ALTERNATIVES DISCUSSION

When discussing the similarities between projects, and bundling of projects with common Project Elements, project alternatives are formed around the benefits to sponsoring agencies that are willing to consolidate and work together. Project scheduling and financial commitments are the two primary drivers for project implementation, both requiring a high level of commitment from the sponsoring agencies. In most cases, multi-agency agreements (e.g., memorandum of understanding) need to be considered in the project alternatives development.

Figure G-1 of **Section G – Project Solicitation, Selection and Prioritization**, of the IRWM Plan summarizes the process of delivering a project which satisfies both the state and regional goals and objectives. Project Elements become the catalyst (or activity) between recognizing the needs of a Resource or Water Management Strategy, and turning that strategy into one or

more project activities which satisfy the IRWM Goals and Objectives. The top 15 projects listed in Table G-3 were individually evaluated, each with a separate table in **Appendix G-5 – Project Form Review Paper**, to qualitatively describe the Project Elements needed to bridge the state and IRWM Plan’s Goals and Objectives. These tables provide the best means of showing commonalities in project activities for use in creating project alternatives.

H.2.1 Integration Already Occurring

As an outcome of the project ranking and prioritization, two project sponsors recognized the benefits of combining programs with similar Project Elements, identified as Project 7 in Table G-3. The Vineyard Team and Upper Salinas Las Tablas Resource Conservation District joined together in sponsoring what is now referred to as, *Improving On-Farm Water Management Through Demonstration, Research & Outreach of Precision Agricultural Best Management Practices*. **Figure H-1** illustrates the process of integration by starting with the State Objective and Resource Management Strategy, and following a project development process to arrive at a single integrated project meeting state and IRWM Goals and Objectives.

The following twelve (12) Project Elements, developed through the project selection and review process in **Section G – Project Solicitation, Selection, and Prioritization**, are used to describe the types of activities needed for successful implementation of the IRWM Plan:

1. Provide public education and demonstration projects which illustrate the value of habitat restoration and protection of water quality and quantity in natural streams and groundwater.
2. Provide public education and demonstration projects illustrating water conservation for purposes of achieving sustainable surface water and groundwater drinking water supplies.
3. Provide public incentives to gain volunteer change in on-site water use and handling practices.
4. Provide cost-effective alternatives to private property owners in managing on-site sources of contamination.
5. Create and preserve natural ecosystems and protect endangered flora and fauna through Land Stewardship and Conservation Easement programs.
6. Develop and improve water and wastewater treatment facilities to reduce point source discharges of contaminants to natural streams and comply with Waste Discharge permits.
7. Develop and improve methods of water reuse within a community.

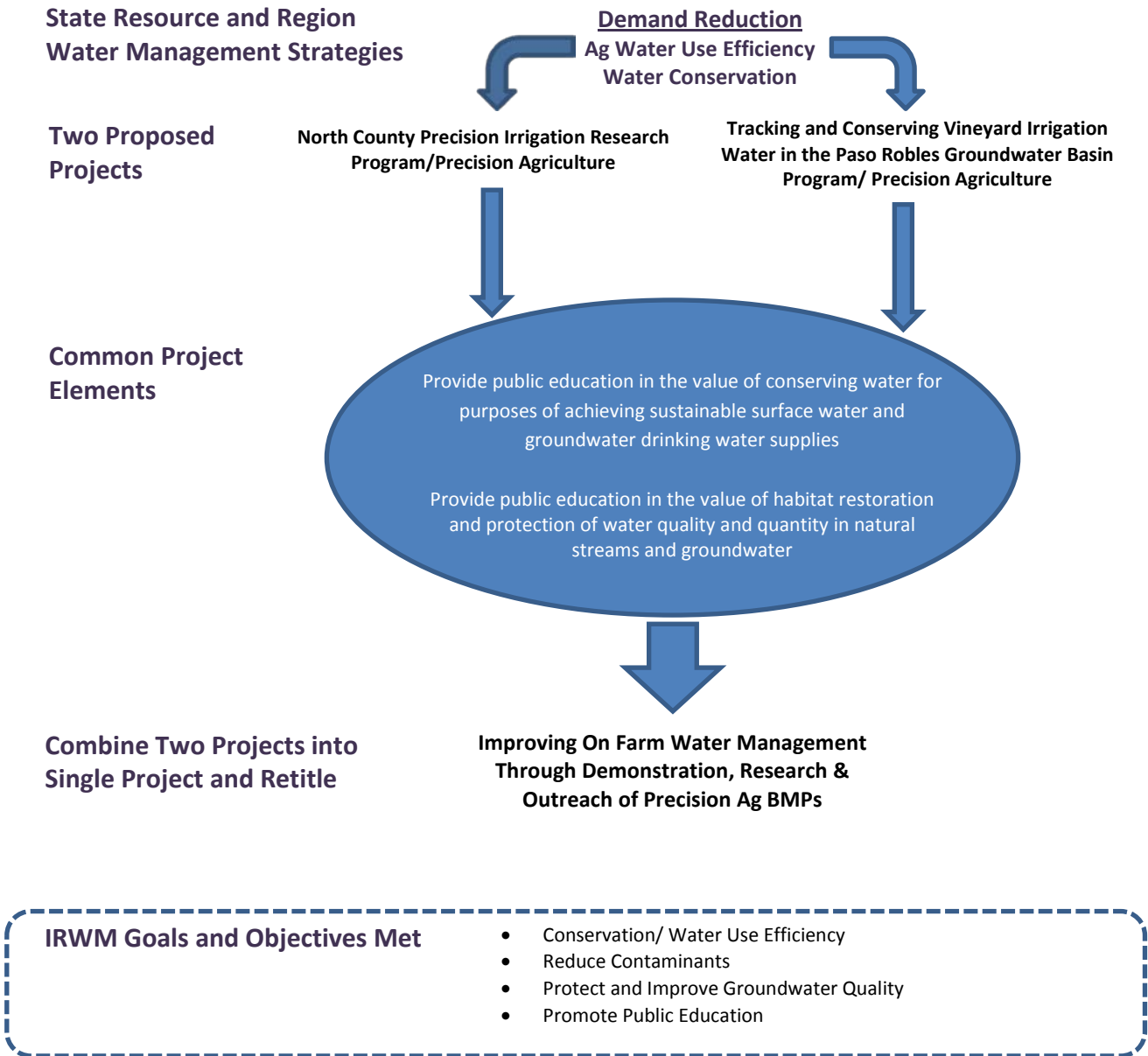


Figure H-1. Example of Project Integration Process

8. Develop new treatment and conveyance facilities to increase and protect the availability of existing water supplies.
9. Develop new groundwater management projects to improve the quality and quantity of groundwater in accordance with a regional stakeholder-based groundwater basin plan.
10. Develop methods of adapting to Climate Change and other vulnerabilities to the region's water resources.
11. Attenuate storm flows and improve stormwater quality by increasing on-site retention and detention controls.
12. Seek outside funding for water and flood control projects in low income areas.

The above list of Project Elements is described as the specific set of activities needed to implement the high priority projects in the IRWM Region. An IRWM Project needs one or more of the listed Project Element activities for successful completion.

H.3 MAPPING PROJECTS BY PROJECT ELEMENTS

A mapping of the Project Element methods¹ and their association with State Resource and San Luis Obispo County IRWM Water Management Strategies is provided in **Table H-1**. (note: Project Elements are abbreviated for purposes of presentation.) The last column of **Table H-1** associates the Project Element methods with the IRWM Objectives. Throughout the Plan, every proposed action is required to satisfy one or more of the IRWM Objectives. As a result, projects described by their Project Elements (i.e., specific activities) must benefit the overall goals and objectives of the IRWM Plan.

Table H-2 includes the same listed Project Elements mapped against the projects to highlight where commonalities between projects exist. For purposes of describing opportunities for project integration, IRWM Projects shown to have five or more Project Elements in common are considered for further integration and bundling to enhance project success. Projects within the same IRWM Sub-Region are further considered as having potential synergistic compatibility and are viewed as a viable project alternative.

¹ Project Elements define the methods of implementing projects and programs to satisfy one or more IRWM Objectives.

Table H-1. Project Water Supply Element Strategy Relationships

Project Element Methods, Abbreviated	Resource Management Strategies	Water Management Strategies	IRWM Objectives
1 Public education and implementation projects illustrating or pertaining to habitat restoration	<ul style="list-style-type: none"> • Pollution Prevention • Watershed Management • Flood Management 	<ul style="list-style-type: none"> • Environmental and Habitat Protection • Agricultural Water Use Efficiency • NPS Pollution Control • Flood Management, • Water Conservation 	<ul style="list-style-type: none"> • Conservation and Water Use Efficiency • Reduce Contaminants • Promote Low Impact Development • Funding for Water Resources Management
2 Public education and implementation projects illustrating water conservation and the values therein	<ul style="list-style-type: none"> • Agricultural Water Use Efficiency 	<ul style="list-style-type: none"> • Water Conservation 	<ul style="list-style-type: none"> • Conservation/ Water Use Efficiency • Reduce Contaminants • Protect and Improve Groundwater Quality, • Promote Public Education
3 Incentives to gain volunteer change in on-site water use and handling practices	<ul style="list-style-type: none"> • Urban Water Use Efficiency • Pollution Prevention • Watershed Management 	<ul style="list-style-type: none"> • Environmental and Habitat Protection • NPS Pollution Control • Water Conservation • Economic Incentives 	<ul style="list-style-type: none"> • Conservation and Water Use Efficiency • Reduce Contaminants • Funding for IRWM Implementation • Support Local Control • Promote Public Education
4 Alternatives to property owner to improve on-site contamination handling practices	<ul style="list-style-type: none"> • Pollution Prevention • Ecosystem Restoration 	<ul style="list-style-type: none"> • Environmental and Habitat Protection • NPS Pollution Control • Water Quality Protection and Improvement • Economic Incentives 	<ul style="list-style-type: none"> • Reduce Contaminants • Promote Public Education • Promote Low Impact Development • Funding for Water Resources Management • Support Local Control
5 Preserve natural ecosystems and protect endangered flora and fauna	<ul style="list-style-type: none"> • Ecosystem Restoration • Pollution Prevention 	<ul style="list-style-type: none"> • Environmental and Habitat Protection, • NPS Pollution Control 	<ul style="list-style-type: none"> • Conserve Balance of Ecosystem • Public Involvement and Stewardship • Protect Endangered Species • Promote Public Education
6 Improve water and wastewater treatment facilities to reduce contaminants	<ul style="list-style-type: none"> • Pollution Prevention 	<ul style="list-style-type: none"> • Water and Wastewater Treatment, • Water Supply Reliability 	<ul style="list-style-type: none"> • Maximize accessibility of Water • Adequate Water Supply • Diversify Supply • Reduce Contaminants
7 Improve methods of water reuse within a community	<ul style="list-style-type: none"> • Water Conservation • Conjunctive Management 	<ul style="list-style-type: none"> • Water Supply Reliability, Groundwater Management 	<ul style="list-style-type: none"> • Maximize accessibility of Water • Adequate Water Supply • Diversify Supply • Groundwater Recharge/ Banking
8 Improve treatment and conveyance facilities to protect existing supplies	<ul style="list-style-type: none"> • Drinking Water Treatment and Distribution 	<ul style="list-style-type: none"> • Water and Wastewater Treatment • Water Supply Reliability, • Water Quality Protection and Improvement • Groundwater Management 	<ul style="list-style-type: none"> • Maximize Accessibility of Water • Implement Water Management Plans • Support Local Groundwater Management • Further Local Basin Management Objectives
9 Implement groundwater management projects to improve quality and quantity of groundwater	<ul style="list-style-type: none"> • Conjunctive Management and Groundwater Storage • Pollution Prevention 	<ul style="list-style-type: none"> • Water Quality Protection and Improvement • Groundwater Management • Conjunctive Use 	<ul style="list-style-type: none"> • Maximize accessibility of Water • Water System Water Quality Improvements • Adequate Water Supply • Diversify Supply • Protect and Improve Groundwater Quality
10 Develop methods of adapting to Climate Change	<ul style="list-style-type: none"> • Conjunctive Management and Groundwater Storage 	<ul style="list-style-type: none"> • Address Climate Change • Water Supply Reliability 	<ul style="list-style-type: none"> • Plan for Vulnerabilities of Supply
11 Attenuate storm flows and improve water quality through on-site retention/detention	<ul style="list-style-type: none"> • Pollution Prevention • Watershed Management • Flood Management 	<ul style="list-style-type: none"> • NPS Pollution Control • Flood Management 	<ul style="list-style-type: none"> • Reduce Contaminants • Promote Low Impact Development • Support Local Control
12 Seek outside funding for water and flood projects in low income areas	<ul style="list-style-type: none"> • Land Use Planning and Management 	<ul style="list-style-type: none"> • Land Use Planning 	<ul style="list-style-type: none"> • Support Local Control • DAC Support and Education

Table H-3 provides a cross-reference to illustrate how many Project Elements are in common between the projects. The top three projects are highlighted and compared with the projects shown to have commonalities.

H.4 POTENTIAL PROJECT INTEGRATION ALTERNATIVES

Other grouping criteria include size of project, cost of project, size and type of sponsoring agencies, types of funding, level of project interest, number of dedicated administrative staff, willingness to work together. In all cases, the grouping of projects needs to reflect a high level of appeal when considering as part of a regional grant application. As examples of how projects can be bundled, projects considered for integration based on **Table H-2** include the following (numerical value after each project identifies the number of Project Elements each project has in common):

Project Integration Alternative 1. Public Outreach and Education Programs for Watershed and Groundwater Quality Enhancement

Incorporates:

- Livestock & Land Program, 7
- LID Pilot Program, 10
- North County Fertilizer Regions Precision Agriculture, 8
- Community Based Social Marketing, 4
- Los Padres CCC Center - Stormwater LID Treatment Project, 5

Strategic Value: Projects are of same order of magnitude, with large educational components and volunteer participation. Management of a single project offers economies of scale both in its implementation and long term monitoring and reporting. All projects have 4 or more Project Elements in common with other listed projects.

Table H-2. Project Elements Common to Project List

Abbreviated Final Project List	Project Elements (abbreviated)											
	1	2	3	4	5	6	7	8	9	10	11	12
	Public education in the value of habitat restoration	Public education in the value of conserving water	Incentives to gain volunteer change in on-site water use and handling	Alternatives to property owner on-site contamination	Preserve natural ecosystems and protect endangered flora and fauna	Improve treatment facilities to reduce contaminants	Improve methods of water reuse within a community	Improve treatment and conveyance facilities to protect existing supplies	Groundwater management projects to improve quality and quantity of GW	Develop methods of adapting to Climate Change	Attenuate storm flows and improve water quality through on-site retention/detention	Seek outside funding for water and flood projects in low income areas
1 Livestock & Land Program												
2 LID Pilot Program												
3 North County Fertilizer Agriculture												
4 Attiyeh Ranch Easement						1						
5 Upper Salinas River Basin Conjunctive Use												
6 Community Based Social Marketing												
7 Improving On Farm Water Management												
8 City of Paso Robles Water Treatment												
9 San Miguel Critical Water System												
10 8th Street Nitrate Removal Facility												
11 Los Padres CCC Center Treatment Project												
12 Oceano Drainage Improvement Project												
13 Lopez Membrane Rack Addition												
14 Recycle Water Distribution Expansion												
15 Pismo Beach Recycled Water Project												
Total Number of Projects Sharing Common Elements (sum of shaded cells)	5	3	3	3	4	1	5	7	4	2	2	3

Table H-3. Cross Reference of Project Elements in Common

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		Livestock & Land Program	LID Pilot Program	North County Fertilizer Agriculture	Attiyeh Ranch Easement	Upper Salinas River Basin Conjunctive Use	Community Based Social Marketing	Improving On Farm Water Management	City of Paso Robles Water Treatment	San Miguel Critical Water System	8th Street Nitrate Removal Facility	Los Padres CCC Center Treatment Project	Oceano Drainage Improvement Project	Lopez Membrane Rack Addition	Recycle Water Distribution Expansion	Pismo Beach Recycled Water Project	Project Elements in Common
1	Livestock & Land Program		2	3	0	0	1	0	0	0	0	1	0	0	0	0	7
2	LID Pilot Program	2		3	1	1	2	1	0	0	0	3	1		1	1	16
3	North County Fertilizer Agriculture	3	3		1	0	1	1	0	0	0	1	1	0	0	0	11
4	Attiyeh Ranch Easement	0	1	1		0	0	0	0	0	0	0	0	0	0	1	3
5	Upper Salinas River Basin Conjunctive Use	0	1	0	0		0	0	1	1	1	1	0	1	2	2	10
6	Community Based Social Marketing	1	2	1	0	0		1	0	0	0	0	0	0	0	0	5
7	Improving On Farm Water Management	0	1	1	0	0	1		0	0	0	0	0	0	0	0	3
8	City of Paso Robles Water Treatment	0	0	0	0	1	0	0		1	2	0	0	2	1	2	9
9	San Miguel Critical Water System	0	0	0	0	1	0	0	1		1	0	0	1	1	2	7
10	8th Street Nitrate Removal Facility	0	0	0	0	1	0	0	2	1		0	0	2	1	2	9
11	Los Padres CCC Center Treatment Project	1	3	1	0	1	0	0	0	0	0		0	0	1	2	9
12	Oceano Drainage Improvement Project	0	1	1	0	0	0	0	0	0	0	0		0	0	1	3
13	Lopez Membrane Rack Addition	0	0	0	0	1	0	0	2	1	2	0	0		1	2	9
14	Recycle Water Distribution Expansion	0	1	0	0	2	0	0	1	1	1	1	0	1		2	10
15	Pismo Beach Recycled Water Project	0	1	0	1	2	0	0	2	2	2	2	1	2	2		17
Total Number of Project Elements in Common		7	16	11	3	10	5	3	9	7	9	9	3	9	10	17	

Project Integration Alternative 2. **San Luis Obispo County Water Reuse Program, Pilot Studies, and Projects**

Incorporates:

- LID Pilot Program, 5
- Upper Salinas River Basin Water Conservation/Conjunctive Use Project, 4
- Los Padres CCC Center - Stormwater LID Treatment Project, 5
- Recycle Water Distribution System Expansion, 4

Strategic Value: Projects are construction focused with objectives targeting water reuse and matching water quality to use. Smaller agencies stand to benefit from a single administrative lead in the implementation and long term reporting of project benefits. All projects have 4 or more Project Elements in common with other listed projects.

Project Integration Alternative 3. **Innovative and Critical Water and Wastewater Improvement Projects in the San Luis Obispo County Region**

Incorporates:

- Upper Salinas River Basin Water Conservation/Conjunctive Use Project, 5
- San Miguel Critical Water System Improvements, 4
- 8th Street Upper Aquifer Well and Nitrate Removal Facility, 5
- Lopez Water Treatment Plant Membrane Rack Addition, 5
- Recycle Water Distribution System Expansion, 5

Strategic Value: Project is focused on physical construction elements of similar size and cost, aimed at groundwater enhancement and clean drinking water. The geographic proximity and size of the shared water systems benefitting from the project promises full participation by the sponsoring agencies and is likely to include in-kind services. All projects have 4 or more Project Elements in common with other listed projects.

H.5 BENEFITS OF PROJECT/AGENCY INTEGRATION

As part of the IRWM Plan monitoring and performance reporting, or updating of the project list, integration strategies need to be reviewed and actions taken to assist agencies in combined cooperative implementation of projects to allow for economies of scale and shared resources. As the lead agency in the preparation of the reporting and Call-for-Projects, the District is in the best position to foster sponsoring agency cooperation to achieve the highest value and cost effectiveness in project selection and ranking.

In cases where sponsoring agencies share common goals, project and program similarities are formulated based on the decision tree shown in **Figure H-2**.

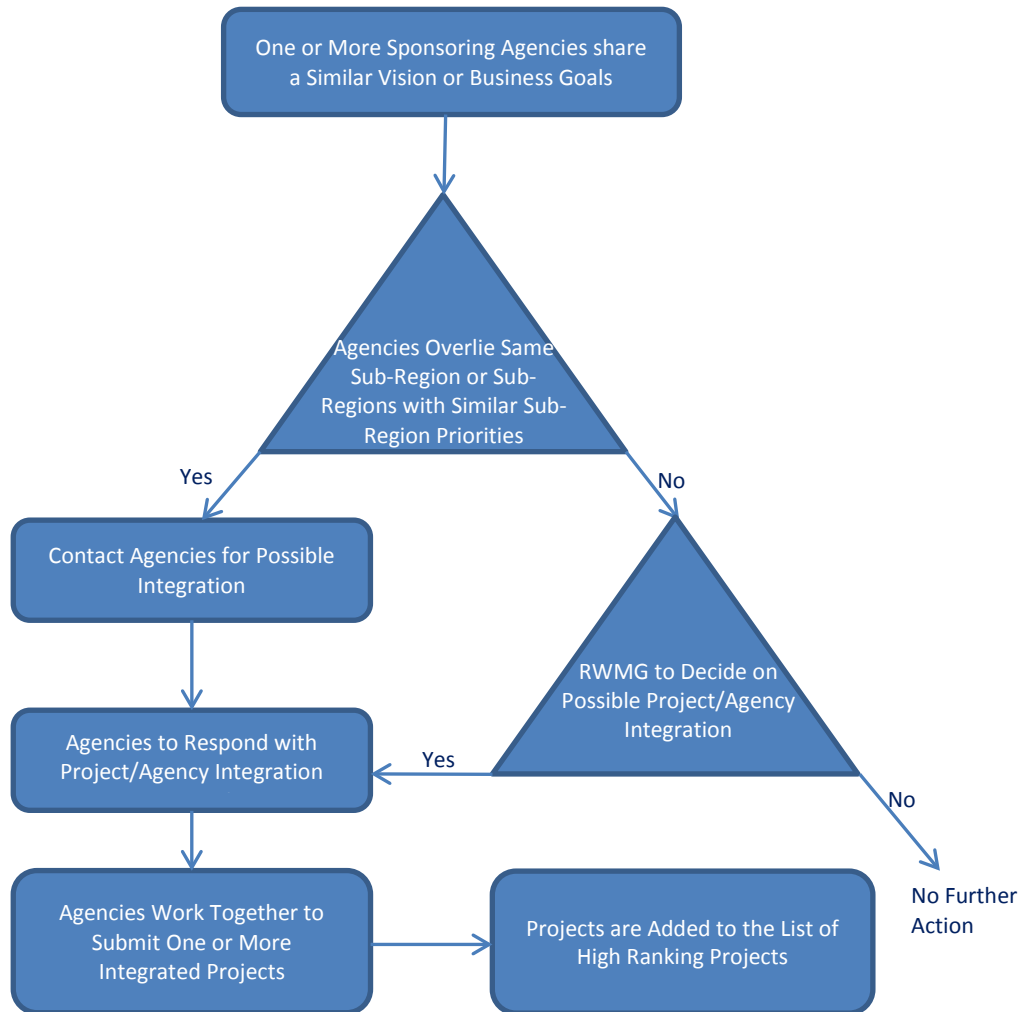


Figure H-2. Decision Tree for Project and Agency Integration

If sponsoring agencies are either located in the same Sub-Region, or lie in different Sub-Regions but share similar Sub-Region Priorities (see **Section E – Goals and Objectives**, Table E-11), multiple sponsoring agencies are contacted by the District on behalf of the RWMG prior to establishing the ranked project list. The District formulates and provides the positive aspects of creating project synergies in working together. The contacted agencies will have specified amount of time to explore the benefits of combining resources in terms of projects and financial aid to create new integrated projects. The RWMG may not include the projects on the project list if a combined project cannot be formulated. In most cases, however, integrated projects are added to the list of high ranking projects. If one or more agencies simply share a

common vision or business goals, the RWMG discusses possible outreach to the agencies to bring awareness, and to create a higher level of project and agency integration for the region. Further incentives for integration will be reviewed on a case-by-case basis.

