The below schedule shows the benefits and costs analysis for the three projects included in this proposal. The schedules show the start and end date for each project as well a milestones for each task that is detailed in *Attachment 3 – Work Plan.*

City of Holtville Wastewater Treatment Plan Improvement Project

Please find below, Table 12, which outlines the non-monetized benefits of the project. Included below is the analysis of those descriptions where the proposal will achieve those benefits. Please find attached Table 19, *BenCost Exhibit A*, which details the annual cost of the project, as well as Table 20, *BenCost Exhibit D*, which outlines the proposed benefits and costs of all three projects in this proposal.

The projects objectives will make the mandated improvements to the Wastewater Treatment Plant in a timely and cost effective manner, and will do so with minimal adverse impacts to the environmental and the disadvantaged community which it serves. The primary benefit of this project will be to diversify the regional water supply portfolio to ensure a long-term, verifiable, reliable and sustainable supply to meet current and future agricultural, municipal, commercial, industrial and environment demands. The project will do this in a way that will protect and enhance aquatic ecosystems and wildlife habitat and will focus on ecosystem improvement and environmental protection.

Provide education or technology benefits

The rehabilitated Wastewater Treatment Plant (WWTP) project will provide a higher level of treatment quality in terms of biological oxygen demand (BOD), suspended solids and nutrient removal (ammonia) using less energy. This technological benefit will allow the City to use 20 percent less energy even though it will include new components. The reduction in energy is possible as the new components, specifically, the new compressors will be more energy efficient.

Help avoid, reduce or resolve various public water resources conflicts

If funded, the proposed project would resolve conflicts between the Regional Water Quality Control Board (RWQCB) and the City of Holtville. The Holtville Wastewater WWTP is out of compliance with its RWQCB NPDES permit and is under a Cease and Desist Board Order. If the City does not comply with the Cease and Desist Order, there will be fines and penalties issued for lack of compliance with the Order. However, if improvements are made to the WWTP and the City is able to comply, the issue will be resolved and there will be no fines or penalties issued.

Promote social health and safety

The project will promote social health and safety by reducing exposure to water related hazards. By incorporating new equipment and rehabilitating the WWTP, the WWTP will be able to improve the treatment of wastewater, releasing into the environment improved effluent thereby reducing wastewater related hazards. Effluent would have a reduction of ammonia and e-coli

Have other social benefits

Holtville is considered is a disadvantaged community. The current sewer rates constitute 1.5% of the median household income (MHI) and sewer rates increases will be needed to service new debt incurred for the new improvements. The City of Holtville relies heavily on the agricultural industry and experiences many economic challenges. The Holtville community has a per capita income of $20,749 in comparison to the State's $29,634 (2007-2011 Census). Obtaining grant funding to make improvements to the wastewater treatment plant will reduce the amount that sewer rates will need to be increased for the community, thereby reducing the adverse economic effects to a disadvantaged community.

Benefit wildlife or habitat in ways that were not quantified in Attachment 7

Effluent from the Wastewater Treatment Plant is released into the Pear Drain, a tributary to the Alamo River, which is a tributary to the Salton Sea. The Salton Sea is located along one of the most important flyways in North America, providing critical habitat for more than 400 species of resident and migrating birds and home to a variety of fish. The improvement of effluent from the WWTP will benefit wildlife. Particularly, the proposed project will positively impact species of special concern such as the Fathead Minnow andthe Desert Pupfish, an endangered species for which a Recovery Plan was completed in 1993. Improving the water quality of water traveling into the Salton Sea will positively impact fish, thereby positively impacting the birds on land which eat the fish.

Improve water quality in ways that were not quantified in Attachment 7

The completion of the project will improve water quality for impaired bodies of water such as the Pear Drain, Alamo River and the Salton Sea, all of which are impaired bodies of water per Section 303(d) of the Clean Water Act. The project would lead to the reduction of contaminants such as ammonia, nickel and e-coli.

Reduce net emission in ways that were not quantified in Attachment 7

The improvements to the WWTP include new energy efficient machinery and electrical updates, reducing the consumption of electricity by 20%. Reducing energy usage in turn will lead to a reduction of greenhouse gas emissions as the combustion of fuels to generate electricity is responsible for emitting greenhouse gas emissions. The project will also reduce the amounts of harmful chemicals such as ammonia, which is toxic to aquatic life nickel and e-coli into the water.

Provide a long term solution in place of a short-term one

The proposed project will provide a long term solution to the City's wastewater treatment problems. It is anticipated that the new wastewater components will allow the City to comply with its NPDES permit, specifically, the stringent ammonia requirements.

Promote energy savings or replace fossil fuel based energy sources with renewable energy and resources

The rehabilitated WWTP includes the replacement of existing compressors with new compressors which consume less energy. It is estimated that there will be a reduction of 20% of energy with the new more energy efficient compressors. The reduction in consumption of electricity also reduces the amount of fossil fuels used for the operation of the WWTP. Additionally, the proposed project includes the construction of a new laboratory building and will replace an old laboratory building. The new building will include more energy efficient components such as new insulation, a new air conditioner, and lighting fixtures that will also lead to a reduction in the consumption of electricity.
Lastly, the project will lead to the reuse of materials. The dry sludge waste from the WWTP is hauled-off and used to fertilize agricultural land to grow crops used as feed for animals thereby recycling waste materials.

Job Creation to Strengthen Local Economy

Holtville is within Imperial County in southeastern California. Imperial County's unemployment rate in January 2013 was 25.8% and consistently has the highest unemployment rate in the nation. It is anticipated that the proposed project will create 40-50 construction jobs over a twelve (12) month period, and improving the local economy.

Table 12 – Non-monetized Benefits Checklist

City of Holtville Wastewater Treatment Plan Improvement Project

No.	Question	Enter "Yes", "No" or "Neg"
	Community/Social Benefits **Will the proposal**	
1	**Provide education or technology benefits?**	
	Examples are not limited to, but may include: - Include educational features that should result in water supply, water quality, or flood damage reduction benefits?	Yes

	- Develop, test, or document a new technology for water supply, water quality, or flood damage reduction management? - Provide some other education or technological benefit?	
2	**Provide social recreation or access benefits?**	
	Examples are not limited to, but may include: - Provide new or improved outdoor recreation opportunities? - Provide more access to open space? - Provide some other recreation or public access benefit?	No
3	**Help avoid, reduce or resolve various public water resources conflicts?**	
	Examples are not limited to, but may include: - Provide more opportunities for public involvement in water management? - Help avoid or resolve an existing conflict as evidenced by recurring fines or litigation? - Help meet an existing state mandate (e.g., water quality, water conservation, flood control)?	Yes
4	**Promote social health and safety?**	
	Examples are not limited to, but may include: - Increase urban water supply reliability for fire-fighting and critical services following seismic events? - Reduce risk to life from dam failure or flooding? - Reduce exposure to water-related hazards?	Yes
5	**Have other social benefits?**	
	Examples are not limited to, but may include: - Redress or increase inequitable distribution of environmental burdens? - Have disproportionate beneficial or adverse effects on disadvantaged communities, Native Americans, or other distinct cultural groups?	Yes
	Environmental Stewardship Benefits: **Will the proposal**	
6	**Benefit wildlife or habitat in ways that were not quantified in Attachment 7?**	
	Examples are not limited to, but may include: - Cause an increase in the amount or quality of terrestrial, aquatic, riparian or wetland habitat? - Contribute to an existing biological opinion or recovery plan for a listed special status species? - Preserve or restore designated critical habitat of a listed species? - Enhance wildlife protection or habitat?	Yes
7	**Improve water quality in ways that were not quantified in Attachment 7?**	
	Examples are not limited to, but may include: - Cause an improvement in water quality in an impaired water body or sensitive habitat? - Prevent water quality degradation? - Cause some other improvement in water quality?	Yes
8	**Reduce net emissions in ways that were not quantified in Attachment 7?**	

	Examples are not limited to, but may include: - Reduce net production of greenhouse gasses? - Reduce net emissions of other harmful chemicals into the air or water?	Yes
9	**Provide other environmental stewardship benefits, other than those claimed in Sections D1, D3, or D4?**	
	Sustainability Benefits: **Will the proposal**	
10	**Improve the overall, long-term management of California groundwater resources?**	
	Examples are not limited to, but may include: - Reduce extraction of non-renewable groundwater? - Promote aquifer storage or recharge?	No
11	**Reduce demand for net diversions for the regions from the Delta?**	No
12	**Provide a long-term solution in place of a short-term one?**	Yes
13	**Promote energy savings or replace fossil fuel based energy sources with renewable energy and resources?**	
	Examples are not limited to, but may include: - Reduce net energy use on a permanent basis? - Increase renewable energy production? - Include new buildings or modify buildings to include certified LEED features? - Provide a net increase in recycling or reuse of materials? - Replace unsustainable land or water management practices with recognized sustainable practices?	Yes
14	**Improve water supply reliability in ways not quantified in Attachment 7?**	
	Examples are not limited to, but may include: - Provide a more flexible mix of water sources? - Reduce likelihood of catastrophic supply outages? - Reduce supply uncertainty? - Reduce supply variability?	No
15	**Other (If the above listed categories do not apply, provide non-monetized benefit description)?**	

Interconnection Project between City of El Centro, City of Imperial and the Heber Utility District

Please find below, Table 12, which outlines the non-monetized benefits of the project. Included below is the analysis of those descriptions where the proposal will achieve those benefits. Please find attached Table 19, *BenCost Exhibit B* which details the

annual cost of the project, as well as Table 20, *BenCost Exhibit D* which outlines the proposed benefits and costs of all three projects in this proposal.

Help avoid, reduce or resolve various public water resources conflicts

This project will support the Imperial IRWM by providing a reliable water source to the region by promoting an interconnected system that provides system redundancy, promotes a community benefit and improves the overall water supply for the region. The key benefit of this project is the water quality reliability that will be provided once the construction linkage is complete. This project will provide a long term water supply solution for the community and will help to avoid and reduce public water resource conflicts.

Promote social health and safety

Currently, the only alternative being used in the event of any emergency is to provide water via water trucks or temporary above ground pipes to connect both systems. By streamlining the benefiting agencies seek to improve the reliability of the existing water distribution systems, since the Interconnect would reduce the likelihood of catastrophic supply outages and reduce supply uncertainty. This project will improve the overall social health of the community by increasing the water supply and by taking advantage of the geographical proximity that these communities have. Water systems in the City of Imperial, City of El Centro and the community of Heber are all independent systems providing potable and fire-fighting water in their respective areas. Water tanks in each individual system can provide limited water supply during an emergency but that might not be enough supply and pressure to sustain fire-fighting efforts during major catastrophes such as earthquake or system failure. The interconnect project would provide redundancy in all three systems.

Have other social benefits

The City of El Centro and the Heber Public Utility District are disadvantaged communities with a Median Household Income that is less than 80 percent of the Statewide annual median household income as identified by the California Department of Water Resources Mapping Tool. The MHI for the City of El Centro is $38,481, and the MHI for the Heber Public Utility District is $37,472 (2006-2010 America Community Survey). This project will directly increase the participation of a small, disadvantaged community in the IRWM process. In addition, this project will develop a multi-benefit, multi-jurisdictional project that considers the needs of two disadvantaged communities. Both cities rely on a single source of water system and would be adversely affected in the event of a major catastrophe.

Provide a long term solution in place of a short-term one.
The proposed project will provide a long term solution to the City's connection issues.

Table 12 – Non-monetized Benefits Checklist Interconnection Project between City of El Centro, City of Imperial and the Heber Utility District		
No.	**Question**	**Enter "Yes", "No" or "Neg"**
	Community/Social Benefits	
	Will the proposal	
1	**Provide education or technology benefits?**	No
	Examples are not limited to, but may include:	
	- Include educational features that should result in water supply, water quality, or flood damage reduction benefits?	
	- Develop, test, or document a new technology for water supply, water quality, or flood damage reduction management?	
	- Provide some other education or technological benefit?	
2	**Provide social recreation or access benefits?**	No
	Examples are not limited to, but may include:	
	- Provide new or improved outdoor recreation opportunities?	
	- Provide more access to open space?	
	- Provide some other recreation or public access benefit?	
3	**Help avoid, reduce or resolve various public water resources conflicts?**	Yes
	Examples are not limited to, but may include:	
	- Provide more opportunities for public involvement in water management?	
	- Help avoid or resolve an existing conflict as evidenced by recurring fines or litigation?	
	- Help meet an existing state mandate (e.g., water quality, water conservation, flood control)?	
4	**Promote social health and safety?**	Yes
	Examples are not limited to, but may include:	
	- Increase urban water supply reliability for fire-fighting and critical services following seismic events?	
	- Reduce risk to life from dam failure or flooding?	
	- Reduce exposure to water-related hazards?	
5	**Have other social benefits?**	Yes
	Examples are not limited to, but may include:	
	- Redress or increase inequitable distribution of environmental burdens?	

	- Have disproportionate beneficial or adverse effects on disadvantaged communities, Native Americans, or other distinct cultural groups?	
	Environmental Stewardship Benefits:	
	Will the proposal	
6	**Benefit wildlife or habitat in ways that were not quantified in Attachment 7?**	No
	Examples are not limited to, but may include:	
	- Cause an increase in the amount or quality of terrestrial, aquatic, riparian or wetland habitat?	
	- Contribute to an existing biological opinion or recovery plan for a listed special status species?	
	- Preserve or restore designated critical habitat of a listed species?	
	- Enhance wildlife protection or habitat?	
7	**Improve water quality in ways that were not quantified in Attachment 7?**	No
	Examples are not limited to, but may include:	
	- Cause an improvement in water quality in an impaired water body or sensitive habitat?	
	- Prevent water quality degradation?	
	- Cause some other improvement in water quality?	
8	**Reduce net emissions in ways that were not quantified in Attachment 7?**	No
	Examples are not limited to, but may include:	
	- Reduce net production of greenhouse gasses?	
	- Reduce net emissions of other harmful chemicals into the air or water?	
9	**Provide other environmental stewardship benefits, other than those claimed in Sections D1, D3, or D4?**	
	Sustainability Benefits:	
	Will the proposal	
10	**Improve the overall, long-term management of California groundwater resources?**	No
	Examples are not limited to, but may include:	
	- Reduce extraction of non-renewable groundwater?	
	- Promote aquifer storage or recharge?	
11	**Reduce demand for net diversions for the regions from the Delta?**	No
12	**Provide a long-term solution in place of a short-term one?**	Yes
13	**Promote energy savings or replace fossil fuel based energy sources with renewable energy and resources?**	No
	Examples are not limited to, but may include:	
	- Reduce net energy use on a permanent basis?	
	- Increase renewable energy production?	
	- Include new buildings or modify buildings to include certified LEED features?	
	- Provide a net increase in recycling or reuse of materials?	
	- Replace unsustainable land or water management practices with recognized	

	sustainable practices?	
14	**Improve water supply reliability in ways not quantified in Attachment 7?**	Yes
	Examples are not limited to, but may include:	
	- Provide a more flexible mix of water sources?	
	- Reduce likelihood of catastrophic supply outages?	
	- Reduce supply uncertainty?	
	- Reduce supply variability?	
15	**Other (If the above listed categories do not apply, provide non-monetized benefit description)?**	

Stormwater Drainage Improvements to the Township of Seeley

Please find below, Table 12, which outlines the non-monetized benefits of the project. Included below is the analysis of those descriptions where the proposal will achieve those benefits. Please find attached Table 19, *BenCost Exhibit C,* which details the annual cost of the project, as well as Table 20, *BenCost Exhibit D,* which outlines the proposed benefits and costs of all three projects in this proposal. In addition, because this project will have flood reduction benefits, please find Table 18, *BenCost Exhibit E,* which details the expected benefit of this project over the projects life cycle. Please find a thorough cost benefit analysis for this project attached as *BenCost Exhibit F.*

The City of Seeley is seeking to provide the City with much needed drainage infrastructure. This project will convey rainwater away from the community and will in turn help to prevent the flooding of streets and provide a better and safer public access for vehicles and pedestrians in the community.

Provide education or technology benefits

The project will provide educational benefit, in that children will not stay home from school on rainy days. Residents who do not own cars will be able to walk safely to destinations around the community, on rainy days.

Provide social recreation or access benefits

This project promotes social health and safety as it will reduce vector control issues and the danger to pedestrians walking through flooded streets.

Promote social health and safety

This project will have additional social benefits as Seeley is a disadvantaged community and has little or no drainage infrastructure. The project will be beneficial for all citizens

of this community. In addition, this project will reduce problems with mosquitoes and the diseases they carry.

Improve water quality in ways that were not quantified in Attachment 7

By draining storm water through a passive storm/nuisance water treatment system, which will cleanse water before it drains into the New River, this project will provide additional water quality benefits. The water treatment system that is a part of this project will mitigate the effect of the additional storm water draining into the New River.

Provide a long-term solution in place of a short-term one

Since the project has a useful life is 50 years it is providing a long term solution in place of the current short term, inefficient, solution of pumping water each time it rains.

Table 12 – Non-monetized Benefits Checklist
Stormwater Drainage Improvements to the Township of Seeley

No.	Question	Enter "Yes", "No" or "Neg"
	Community/Social Benefits **Will the proposal**	
1	**Provide education or technology benefits?**	Yes
	Examples are not limited to, but may include: - Include educational features that should result in water supply, water quality, or flood damage reduction benefits? - Develop, test, or document a new technology for water supply, water quality, or flood damage reduction management? - Provide some other education or technological benefit?	
2	**Provide social recreation or access benefits?**	Yes
	Examples are not limited to, but may include: - Provide new or improved outdoor recreation opportunities? - Provide more access to open space? - Provide some other recreation or public access benefit?	
3	**Help avoid, reduce or resolve various public water resources conflicts?**	No.
	Examples are not limited to, but may include: - Provide more opportunities for public involvement in water management? - Help avoid or resolve an existing conflict as evidenced by recurring fines or litigation? - Help meet an existing state mandate (e.g., water quality, water conservation, flood control)?	
4	**Promote social health and safety?**	Yes
	Examples are not limited to, but may include:	

	- Increase urban water supply reliability for fire-fighting and critical services following seismic events? - Reduce risk to life from dam failure or flooding? - Reduce exposure to water-related hazards?	
5	**Have other social benefits?**	Yes
	Examples are not limited to, but may include: - Redress or increase inequitable distribution of environmental burdens? - Have disproportionate beneficial or adverse effects on disadvantaged communities, Native Americans, or other distinct cultural groups?	.
	Environmental Stewardship Benefits: **Will the proposal**	
6	**Benefit wildlife or habitat in ways that were not quantified in Attachment 7?**	No.
	Examples are not limited to, but may include: - Cause an increase in the amount or quality of terrestrial, aquatic, riparian or wetland habitat? - Contribute to an existing biological opinion or recovery plan for a listed special status species? - Preserve or restore designated critical habitat of a listed species? - Enhance wildlife protection or habitat?	
7	**Improve water quality in ways that were not quantified in Attachment 7?**	Yes
	Examples are not limited to, but may include: - Cause an improvement in water quality in an impaired water body or sensitive habitat? Prevent water quality degradation? - Cause some other improvement in water quality?	
8	**Reduce net emissions in ways that were not quantified in Attachment 7?**	No.
	Examples are not limited to, but may include: - Reduce net production of greenhouse gasses? - Reduce net emissions of other harmful chemicals into the air or water?	
9	**Provide other environmental stewardship benefits, other than those claimed in Sections D1, D3, or D4?**	No.
	Sustainability Benefits: **Will the proposal**	
10	**Improve the overall, long-term management of California groundwater resources?**	No.
	Examples are not limited to, but may include: - Reduce extraction of non-renewable groundwater? - Promote aquifer storage or recharge?	
11	**Reduce demand for net diversions for the regions from the Delta?**	No.
12	**Provide a long-term solution in place of a short-term one?**	Yes.
13	**Promote energy savings or replace fossil fuel based energy sources with renewable energy and resources?**	No.

	Examples are not limited to, but may include: - Reduce net energy use on a permanent basis? - Increase renewable energy production? - Include new buildings or modify buildings to include certified LEED features? - Provide a net increase in recycling or reuse of materials? - Replace unsustainable land or water management practices with recognized sustainable practices?	
14	**Improve water supply reliability in ways not quantified in Attachment 7?**	No.
	Examples are not limited to, but may include: - Provide a more flexible mix of water sources? - Reduce likelihood of catastrophic supply outages? - Reduce supply uncertainty?	