



June 21, 2018

SENT VIA: EMAIL

Mr. Roland Sanford  
General Manager  
Solano County Water Agency  
810 Vaca Valley Parkway #203  
Vacaville, CA 95688

SUBJECT: Update of Chapters 5 and 6 of the Dixon Watershed Management Plan

Dear Roland:

West Yost Associates (West Yost) is pleased to provide this proposed approach for updating Chapters 5 and 6 of the 2001 Dixon Watershed Management Plan (DWMP). These two chapters cover drainage service for the Northeast Quadrant Specific Plan Area (NEQ) of the City of Dixon (City), which is tributary to the Tremont 3 Drain. The update is needed because:

- The project identified in the DWMP is not feasible because of land owner opposition to the size of the right-of-way acquisition and environmental/habitat restrictions.
- Solano County's General Plan (November 2008) includes 515 acres of agricultural industrial service area (AISA) development within the Tremont 3 Drain Watershed (near the NEQ). When the DWMP was prepared in 2001, the AISA development was not included in the Tremont 3 Drain evaluations. Consequently, the proposed drainage facilities did not take into account the impact of the revised land use in the AISA development.
- An update of these chapters could identify opportunities to address new regulatory requirements such as the need for habitat creation and groundwater recharge.

The regional drainage planning presented in Chapters 5 and 6 of the DWMP needs to be updated and revised to identify a regional drainage project that avoids land owner opposition and environmental impacts, and to accommodate Solano County's (County's) planned AISA development. We have identified a series of tasks that define the proposed approach for the update of Chapters 5 and 6 of the DWMP. The tasks are briefly described below.

Since 2016, the City of Dixon and Dixon Resource Conservation District staff have conducted several meetings to coordinate this effort with Solano County staff to understand and address the County's issues and concerns related to drainage for the AISA, including providing County staff opportunities to review, comment on, and revise this proposed scope of work. This proposal is based on the limited input received from County staff and is intended to address their concerns and issues. Through this work, the County will continue to be considered a key stakeholder and will be provided numerous opportunities to participate in the revision of the DWMP Chapters 5 and 6.

## SCOPE OF WORK

Our proposed scope of work is presented below by task.

- Task 1 – Summarize Past Studies and Models. Relevant past studies will be identified and concisely summarized in a draft Technical Memorandum (TM). The TM will be finalized after Workshop 1.
- Task 2 – Define Evaluation and Modeling Approach for the DWMP Update. This task defines specific approaches for Tasks 3 through 13. For example, it defines whether “Existing Conditions” means land uses as they are today or prior to any development in the NEQ and AISA areas. It will also define the storm events to be evaluated, such as the 100-year/1-day event that is the basis of the County’s detention storage policy and the 100-year/4-day storm that is the basis of the City’s detention basin sizing. We will also define buildout land use conditions (impervious coverage) for both the NEQ and the AISA. This work will be summarized in a draft TM. The TM will be finalized after Workshop 1.

Workshop 1 – The goal for this workshop is to present the work from Tasks 1 and 2 in a brief PowerPoint presentation and to achieve agreement on the evaluation and modeling approach for the DWMP Update. Stakeholders will be invited to the meeting and will be provided opportunities to participate in the workshop. We will prepare a summary of comments received during the meeting. Working with SCWA, we will develop a course of action based on the received comments. We will advise SCWA if the course of action deviates from the anticipated tasks below.

- Task 3 – Evaluate Existing Conditions (100-year/1-day storm and 100-year/4-day storm). We will update the regional drainage model to represent existing conditions as determined in Task 2.
- Task 4 – Evaluate Three Buildout Land Use Conditions (100-year/1-day storm and 100-year/4-day storm). We will revise the existing conditions model to represent buildout of just the NEQ, buildout of just the AISA, and buildout of both the NEQ and AISA without detention basins or other drainage mitigation.
- Task 5 – Compare Existing and the Three Buildout Conditions. West Yost will prepare charts showing flow and water surface elevations for both existing conditions and the three buildout conditions at critical locations. This comparison will identify the potential drainage impacts due to the development. We will also compare the peak flows from these models with the Dixon Regional Joint Powers Authority peak flow limitations (crossing the railroad and at the discharge from DRCD’s Tremont 3 Drain to RD 2068’s Main Drain).
- Task 6 – Estimate development and tax income on a per acre basis for agricultural, agricultural industrial, and City commercial/industrial land uses. This task will be performed by Goodwin Consulting Group (GCG) as a subconsultant to West Yost. GCG’s proposed work scope is listed below:
  - Work with West Yost and applicable public agencies to determine existing and proposed zoning in the location of potential detention basins, both in the County and in the City.

- Estimate the loss in developed value and annual operating income to a property owner associated with a requirement to construct an on-site one-acre detention basin on land that would otherwise be developed in the County. This calculation would account for any existing value and operating income on a per acre basis that can be applied to basins of varying sizes.
- Estimate the loss of property tax revenue to the County associated with a requirement to construct an on-site one-acre detention basin on land that would otherwise be developed in the County. This calculation would account for any existing property tax revenue received by the County on a per acre basis that can be applied to basins of varying sizes.
- Estimate the loss in developed value and annual operating income to a property owner associated with a requirement to construct an on-site one-acre detention basin on land that would otherwise be developed in the City. This calculation would account for any existing value and operating income on a per acre basis that can be applied to basins of varying sizes.
- Estimate the loss of property tax revenue to the City associated with a requirement to construct an on-site one-acre detention basin on land that would otherwise be developed in the City. This calculation would account for any existing property tax revenue received by the City on a per acre basis that can be applied to basins of varying sizes.
- Prepare calculation tables that present the assumptions, methodology, and results of the analysis.
- Prepare a brief Memorandum that describes the analysis and summarizes the findings. This memorandum will be included as an appendix in the revisions of the DWMP chapter revisions.
- Task 7 – Present the results of Tasks 3 through 6 in a TM. We will prepare a draft TM presenting the results from Tasks 3 through 6. The TM will be finalized after Workshop 2.

Workshop 2 – The goal for this workshop is to present the work from Tasks 3 through 7 in a brief PowerPoint presentation and to achieve agreement/approval of the findings from Tasks 3 through 7 and to define the range of potential improvement alternatives to be evaluated in Tasks 8 through 13. Tasks 8 through 13 will include modeling the improvement alternatives, and updating the model results figures to include the results for the improvement alternatives and estimating costs. Stakeholders will be invited to the meeting and will be provided opportunities to participate in the workshop. Examples of potential improvement alternatives are identified below in Tasks 8 through 13. We will prepare a summary of comments received during the meeting. Working with SCWA, we will develop a course of action based on the received comments. We will advise SCWA if the course of action deviates from the anticipated tasks below.

Each of the following alternatives will be evaluated for drainage impacts, including increase water surface elevations, increased duration of flooding, increased potential for channel bed/bank scour. Each alternative will also be evaluated for compliance with the Dixon Regional Joint Powers Authority flow limitations.

- Task 8 – Evaluate an alternative for buildout of the just NEQ. This alternative will include detention basins serving only the NEQ (sized for both the 100-year/1-day storm and 100-year/4-day storm).
- Task 9 – Evaluate an alternative for buildout of the just the AISA that includes detention basin(s) serving only the AISA (sized for both the 100-year/1-day storm and 100-year/4-day storm).
- Task 10 – Evaluate an alternative for buildout of both the NEQ and AISA that includes a regional detention basin(s) serving both the NEQ and AISA (sized for both the 100-year/1-day storm and 100-year/4-day storm).
- Task 11 – Evaluate an alternative for buildout of the both the NEQ and AISA using flood easements serving both the NEQ and AISA (sized for both the 100-year/1-day storm and 100-year/4-day storm).
- Task 12 – Evaluate one yet to be determined alternative (sized for both the 100-year/1-day storm and 100-year/4-day storm).
- Task 13 – Cost Evaluation. We will estimate the cost of each alternative, including construction/capital costs, annual Operation & Maintenance costs, lost economic benefit to property owners, lost tax revenues to the County/City from land used for detention basins and other drainage improvements, and a present value cost evaluation of these costs. The TM and comparison matrix from Task 14 will include the cost information for each alternative.
- Task 14 – Comparison TM. Compare the alternatives in a TM that includes schematics of the alternatives, identifies opportunities for joint uses such as continued agricultural production, public recreation, created habitat, water quality treatment (including trash screening), and groundwater recharge. The TM will include an alternatives comparison matrix. The draft TM will be finalized after Workshop 3.

Workshop 3 – The goal for this workshop is to present the work from Tasks 8 through 14 in a brief PowerPoint presentation and to: (1) present and discuss the preliminary TM and alternatives comparison matrix; (2) achieve agreement/approval of the analysis and findings from Tasks 8 through 14; (3) identify if additional information is needed to help select a preferred alternative; and/or (4) achieve a staff-level selection of a preferred alternative. Stakeholders will be invited to the meeting and will be provided opportunities to participate in the workshop. We will prepare a summary of comments received during the meeting. Working with SCWA, we will develop a course of action based on the received comments. We will advise SCWA if the course of action deviates from the anticipated tasks below.

- Task 15 Prepare a DWMP Addendum. We will convert the TMs and other work products from Tasks 1 through 14 into an Addendum that revises Chapter 6 of the DWMP. We will prepare and submit a draft Addendum. We will finalize the Addendum by addressing the comments received on the draft Addendum.

The work and tasks needed after Workshop 3 will be defined at Workshop 3. Future work could include the following tasks:

- Identifying development impact fees,
- Evaluating bond financing,
- Identifying potential future grants and low interest loans, or
- Developing Council/Board presentations.

This future work is not included in the budget presented below, but can be performed by West Yost if requested and if a budget augmentation is provided.

## BUDGET AND SCHEDULE

The estimated budget and schedule for this work are shown in Table 1. The schedule is based on receiving the executed contract and notice to proceed by August 1, 2018.

<b>Table 1. Estimated Level of Effort and Budget and Schedule</b>			
<b>Task</b>	<b>Hours</b>	<b>Budget, dollars</b>	<b>Schedule</b>
Task 1 – Summarize Past Studies and Models	19	3,900	8/31/18
Task 2 – Define Evaluation and Modeling Approach for the DWMP Update	12	2,900	8/31/18
Workshop 1	20	4,600	9/11/18
Task 3 – Evaluate Existing Conditions	13	2,800	9/28/18
Task 4 – Evaluate Three Buildout Land Use Conditions	27	6,000	9/28/18
Task 5 – Compare Existing and the Three Buildout Conditions	26	5,700	9/28/18
Task 6 – Estimate development and tax income on a per acre basis for agricultural, agricultural industrial, and City commercial/industrial land uses (hours and budget are exclusively for GCG)	123	32,400	10/12/18
Task 7 – Present the results of Tasks 3 – 6 in a TM	43	9,400	10/26/18
Workshop 2	32	6,600	11/7/18
Task 8 – Evaluate an alternative for buildout of the just NEQ	30	6,500	1/11/19
Task 9 – Evaluate an alternative for buildout of the just the AISA that includes detention basin(s) serving only the AISA	30	6,500	1/11/19
Task 10 – Evaluate an alternative for buildout of both the NEQ and AISA that includes a regional detention basin(s) serving both the NEQ and AISA	30	6,500	1/11/19
Task 11 – Evaluate an alternative for buildout of both the NEQ and AISA using flood easements serving both the NEQ and AISA	30	6,500	1/11/19
Task 12 – Evaluate one yet to be determined alternative	30	6,500	1/25/19
Task 13 – Cost evaluation	46	9,800	2/8/19
Task 14 – Compare the alternatives in a TM	42	9,100	2/22/19
Workshop 3	32	7,200	3/6/19
Task 15 Prepare a DWMP Addendum	40	8,300	4/26/19
<b>Total</b>	<b>625</b>	<b>141,200</b>	

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Please call me if you have any questions or comments on this proposal.

Sincerely,

WEST YOST ASSOCIATES

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