



City of Baytown January 2011

How to use the Master Drainage Plan (MDP)

These instructions are based on two different needs. Section A describes the approach to using the MDP to address potential development needs associated with a private development. Section B below describes the steps to use the MDP to address potential detention volume needs for City or other public needs.

Section A - How to use the MDP to address private development needs

You could complete the information below after discussion with the developer or you could ask the planned development to complete the information and to then set up a meeting with the City to discuss options. Fill in as much information as is known to date to assist the City in assessing the potential for developing a sub-regional detention basin for the planned development(s) or for a public project. If you don't know the answer to the question or issue identified in the table then fill the table out with your best estimates.

For typical residential developments on-site detention basin could take up from 10% to 20% of the developable land. The developer could use part-of or all-of the basin as an amenity or asset to the development. The developer would need to design, permit and construct the on-site detention basin. The developer would need to maintain the basin throughout the life of the development. The City could loose valuable land to on-site detention that could other wise be used to include developed properties that generate value to the City. If the City were to build the sub-regional detention basin then the sub-regional basin could also be designed to mitigate more than one development and could be used a regional amenities. The City would need to design, permit and construct the on-site detention basin or work with the developer on the costs for some of these items. The City would need to maintain the basin throughout the life of the sub-regional basin.

Table 1

1. Private development specifics:

- a. Call the City to have initial discussions with staff prior to planning the development.
- b. Is there a near-by sub-regional detention basin already in place that may be useful to the planned development? If so where is it located:

- c. Name of the planned development: _____
- d. Type of planned development: _____
- e. Total size of planned development _____ (acres)
- f. Size of planned development residential _____ (acres)
- g. Size of planned development commercial/industrial _____ (acres)
- h. Where is the development to be built: address/location: _____

- i. Proposed development location: _____ (on main stem) _____ (on tributary)
- j. When is development to be built: _____
- k. What is the total volume needs for development: _____ (ac-ft)
- l. Phased development volume needs: Phase 1 _____ (ac-ft) _____ date needed.
- m. Fill in the flood plain mitigation needed: _____ (ac-ft)
- n. Is some or all of the development to be in the flood plain: __ (yes) __ (no)
- o. Is some of the development to be in the floodway: _____ (yes)
- p. Type of drainage for development: storm sewer _____ or roadside ditch _____.
- q. Will development build some or all detention on site: _____ (ac-ft)
- r. Is the on-site development dry basin _____ or wet basin _____.
- s. How much detention volume is development to build on site _____ (ac-ft)
- t. How much detention is needed off site _____ (ac-ft)
- u. Other issues associated with the proposed development that would affect the drainage/detention/mitigation needs of the development: _____

- 2. Use the exhibit 5-3 to identify the nearest potential detention basin that could be used to offset the need of the planned development. First locate the nearest potential detention basin that is downstream of the planned development.
 - a. Is the detention basin: _____ upstream _____ downstream
- 3. Use tables 5-1 through 5-3 to determine identified sub-regional basin size and volume from MDP.
- 4. Specify what basin is planned to be utilized to work with the development: _____
_____ basin name.

5. Are there other development pressures in the area that could use some detention volume in this detention basin location? If so for what other development: _____
6. What volume could be used by the other development: _____ (ac-ft).
7. What is the estimated cost to build detention on-site within the planned development: _____.
8. Set up a meeting with the City to discuss options.

Section B - How to use the MDP to address public project needs

Complete the information below to address issues associated with a planned public project need. Fill in as much information as is known to date to assist making a determination of what sub-regional basin would be applicable for the planned public project need. If you don't know the answer to the question or issue identified in the table then fill the table out with your best estimates.

Table 2

1. Public project needs:

- a. Meet with the applicable City department or staff to have initial discussions prior to planning the project.
- b. Is there a near-by sub-regional detention basin already in place that may be useful to the public project? If so where is it located:

- c. Name of the public project: _____
- d. Type of public project: _____
- e. Total size of public project _____ (acres)
- f. Type of public project: _____
- g. Where is the public project to be built: address/location: _____

- h. Public project location: _____ (on main stem) _____
(on tributary). Specify name or number of stream, channel or tributary.
- i. When is public project to be built: _____
- j. What is the total volume needs for public project: _____ (ac-ft)
- k. Phased project volume needs: Phase 1 _____ (ac-ft) _____ date needed.
- l. Fill in the flood plain mitigation needed: _____ (ac-ft)
- m. Is some or all of the project to be in the flood plain: ____ (yes) ____ (no)
- n. Is some of the project to be in the floodway: _____ (yes)
- o. Type of drainage for project: storm sewer _____ or roadside ditch _____.
- p. Will project build some or all detention on site: _____ (ac-ft)
- q. Is the on-site development dry basin _____ or wet basin _____.
- r. How much detention volume is project to build on site _____ (ac-ft)
- s. How much detention is needed off site _____ (ac-ft)
- t. Other issues associated with the public project that would affect the drainage/detention/mitigation needs of the project: _____

2. Use the exhibit 5-3 to identify the nearest potential detention basin that could be used to offset the need of the public project. First locate the nearest potential detention basin that is downstream of the public project.
 - u. Is the detention basin: _____ upstream _____ downstream
3. Use tables 5-1 to 5-3 to determine identified sub-regional basin size and volume from MDP.
4. Specify what basin is planned to be utilized to work for the public project: _____ basin name.
5. Are there other development pressures in the area that could use some detention volume in this detention basin location? If so for what other development or public project: _____
6. What volume could be used by the other development/project: _____ (ac-ft).
7. Are there funds in the sub-regional detention basin account to plan/design/permit or build a sub-regional detention basin?
8. Will the other department contribute funds for a sub-regional basin and if so how much?
9. Set up a meeting with the applicable City department to discuss options.
10. Make a determination if a sub-regional basin is warranted and if so put into action the plan to evaluate/design/permit/finance/construct and maintain the basin.