



Chapter 4

Assess Potential Impact of Municipal Land Use and Activities

4-1 Introduction

The next step in the watershed assessment process is to identify the municipality's physical characteristics (such as land uses, soil types, and structures) and associated activities. This chapter provides instructions for completing the following forms:

- Form 3, Summary List of Priority Municipal Activities (see Appendix C for a checklist of typical activities)
- Form 4, Summary of Municipal Land Use Categories
- Form 5, Summary of Questions to Identify Key Municipal Physical Characteristics and Activities
- Form 6, Parts 1–3, Municipal Activity Data Entry Sheet.

You should find most, if not all, of the information to complete these forms in existing sources. When complete, these forms enable you to do the following:

- Validate a list of activities occurring across your municipality.
- Create a list of priority municipal activities that have the potential to contribute to specific watershed impairments of concern.
- Identify baseline land-use conditions that may be contributing to general watershed impairments.
- Create a relative TABS for each activity to assist in quantifying its potential impact relative to the condition of the watersheds identified in Form 1.

Summary

This chapter helps you complete Forms 3 through 6. In this chapter, you will

- **identify specific land use;**
- **assess baseline land use conditions and industrial activities;**
- **create a list of priority municipal activities with the potential to contribute to watershed impairments; and**
- **create a relative total activity burden score (TABS) for each activity.**

4-2 Form 3—Develop an Initial List of Activities

Appendix C provides an initial inventory of the activities that may significantly impact the watershed or that may be affecting the state's TMDL process. The first step is to refer to the summary checklist of typical activities in Appendix C. Check each activity on the list that occurs at your municipality and enter its name and location onto Form 3. Enter the receiving waterbody in Question 4. You will develop a Form 6 for each activity listed in Form 3, transferring your answers from Form 6 to questions 5–8 once you have completed it.

4-3 Form 4—Develop a Summary of Municipal Land Use Categories

Watershed management involves gaining an understanding of the municipality's land use and hydrological processes that govern the flow, quality, and velocity of water running onto and off the lands. Understanding this process requires, among other things, current data on the amount and type of land cover. Local watershed groups or regulators also use these measurements as targets for watershed restoration goals (for example, the percentage of stream miles containing adequate riparian buffer zones).

To complete Form 4, which creates a snapshot of your municipality's land-use averages, you may have to review the municipal master plan or land-use plan, GIS layers, zoning maps, and stormwater pollution prevention plans. Once you complete Form 4, compare the results with the surrounding watershed. Pay particular attention if the percentage of impervious areas on your municipality is greater than the average value in the watershed. This may indicate that you need to investigate additional storm water control mechanisms. Various studies have shown that as the amount of impervious areas increases in a watershed, its quality decreases. Therefore, municipalities should consider ways to mimic the site's natural hydrology by further minimizing impervious areas, which reduces stormwater runoff to predevelopment.

To complete Form 4, you should also

- refer to Form 3 to determine the total number of activities in each land-use category,
- determine the total acres for each land-use category,
- calculate pervious and impervious percentages, and
- obtain land-use goals, municipal sustainability goals, or watershed goals found in the land-use plan and expressed by EPA, the state, or public and private watershed groups.

Form 3. Summary List of Municipal Activities That Potentially Affect the Watershed

Activity ID #	1. Activity name	2. Activity location	3. Waterbody or sub-watershed affected	4. Potential activity watershed impact		5. Compliance burden (e.g., governing laws, regulations, and required permits or plans)	6. Total Activity Burden Score (TABS=WPS+AIS)	7. Pollution prevention or enhancements possible? (Yes or No)
				a. Contributes the following regulated impairments (e.g., TMDLs)	b. Contributes the following other impairments			
Date Baseline Completed:						Page ___ of ___		

Form 4. Summary of Municipal Land Use Categories

Description of Land Use Categories	Total # of Activities in each category (Refer to Form 3)	Total acres in each category	Total # impervious acres	Total # pervious acres	Total % impervious	Total % pervious	Acres covered by SWP3 or other plan (specify)	Land use improvement goal (%)	% of goal accomplished
Industrial: (Including: Facility Operations & Maintenance Areas, Motor Pools, Equipment & Material Storage Areas, Truck Parking, Wash Racks, Fueling Points, Industrial Treatment Plants, Fumigation Areas, or Shipping/Receiving Areas)									
Urban (Including: Commercial – Shopping Centers, Grocery Stores, Restaurants, Banks, Parking; Residential – Housing and Parking; Office Buildings and Parking; and roads)									
Mixed Use: (including gravel areas, low impact parking lots, total semi-maintained open grounds (e.g., operational buffers and firebreaks), and recreational grounds (e.g., ball fields, horse stables, golf courses)									
Paved Roadways									
Construction									
Agricultural Operations									
Natural Areas									
Non-riparian forest									
Riparian forest and buffer strip									
Wetlands									
Grasslands or prairie									
Endangered species conservation areas									
Waterbodies (stream, pond, or other)									
Coastal area or estuary									
Other natural areas (e.g., beaches and deserts)									
Acres of natural areas slated as protected critical areas									
Total for municipality:									
Baseline conducted by:							Date:		

4-4 Form 5—Identify Key Physical Characteristics and Activities

Complete Form 5 using the list of municipal activities developed in Form 3. Form 5 contains a series of questions that help you identify only the activities that have the highest potential to impact water resources. Form 5 also provides the screening questions that help you complete Form 6.

Before answering the questions in Form 5, obtain and review the following information:

- Municipal master plan or land-use plan containing size, location, land use, natural resources, and nature of current and planned activities
- Meteorological, soil, and topography data, including average rainfall, soil characteristics, types of ground cover, and topography
- Municipal environmental permits, plans, compliance status, and environmental management system (EMS).

The questions on Form 5 are self-explanatory. Respond to each with “yes,” “no,” or “unsure.” If yes, note the estimated number of activities or the approximate area (such as number of acres) affected. If unsure, describe your reasons. You can also provide additional comments to clarify answers or describe the location of the activities of concern.

To complete Form 5, users should review the following:

- 1. Forms 3 and 4.**
- 2. Meteorological, soil, and topography data.**
- 3. Environmental permits, plans, and compliance status.**
- 4. Environmental management system (EMS).**

Form 5. Summary Questions to Identify Key Physical Characteristics and Activities That May Potentially Impact the Watershed

Question about municipality characteristics or activities	Yes	Unsure	No	Typical impacts or concerns with activity	Number of activities (on-site)	Comments
1. Does the municipality contain streams or rivers that have visible signs of bank erosion, scouring, or unstable stream banks? If yes, note if caused by municipal or off-site activities.				Aquatic habitat degradation, sedimentation, and flooding		
2. Does the municipality contain streams or rivers that have barriers to fish spawning? If yes, note if caused by municipal or off-site activities.				Aquatic habitat degradation, sedimentation, and flooding		
3. Does the municipality contain areas that exhibit uncontrolled flooding during rain events? If yes, note if caused by municipal or off-site activities.				Aquatic habitat degradation, sedimentation, and flooding		
4. Does the municipality contain streams or rivers without adequate riparian buffer (as defined by watershed goals or local zoning requirements)?				Aquatic habitat degradation and sedimentation		
5. Does the municipality contain steep slopes or other areas that exhibit visible signs of erosion? If yes, note if caused by municipal or off-site activities.				Sedimentation and flooding		
6. Does the municipality contain impervious areas (roads, parking lots, buildings, etc.) that drain directly to receiving waters without retention or detention controls?				Flooding and aquatic habitat degradation		
7. Do any upstream properties or activities drain onto the municipality that may affect water quality or cause on site flooding or stream scouring?				Flooding, toxic or conventional pollutants, TMDLs, and aquatic habitat degradation		
8. Does the municipality contain septic systems or other underground injection wells?				Toxic or conventional pollutants to aquifers and TMDLs		

Note: For each question answered yes or unsure, list a specific activity or area on Form 3. For each activity listed on Form 3, complete a Form 6.

Form 5. Summary Questions to Identify Key Physical Characteristics and Activities That May Potentially Impact the Watershed (Continued)

Question about municipal characteristics or activities	Yes	Unsure	No	Typical impacts or concerns with activity	Number of activities (on-site)	Comments
9. Does the municipality produce its own drinking water? If yes, note if using ground or surface waters				Regulatory burden such as source water protection, wellhead protection, or conservation plans		
10. Does the municipality conduct industrial activities that require NPDES wastewater, pretreatment, or storm water discharge permit?				Toxic or conventional pollutants, TMDLs, sedimentation, spills, and regulatory burden (e.g., plans)		
11. Does the municipality maintain bulk storage of POLs or EPRCA chemicals in USTs or ASTs?				Spills to surface or ground waters and regulatory burden		
12. Does the municipality conduct fleet fueling operations or operate fueling stations?				Toxic pollutants, TMDLs, spills, and regulatory burden		
13. Does the municipality have uncovered bulk storage of industrial chemicals, materials, wastes, or equipment (e.g., salt or coal piles)?				Toxic or conventional pollutants, TMDLs, spills, and regulatory burden		
14. Does the municipality apply fertilizers or pesticides on its property?				Toxic or conventional pollutants, TMDLs, spills, and regulatory burden		
15. Is the municipality undertaking or planning major construction or ground disturbing activities?				Sedimentation and regulatory burden		

Note: For each question answered yes or unsure, list a specific activity or area on Form 3. For each activity listed on Form 3, complete a Form 6.

4-5 Form 6—Municipal Activity Data Sheet

Form 6 allows you to record all the information needed to assess each activity's impacts on the watershed identified in Form 3. It contains 6 parts to include:

- Part 1. Describe the activity, its potential impacts, and identify its receiving waterbody.
- Part 2. Quantify the activity's potential impact.
- Part 3. Assess potential pollution prevention (P2) opportunities.
- Part 4. Determine project objectives.
- Part 5. Select BMPs, estimate costs, and identify sources of funds.
- Part 6. Identify project lead and potential project partners.

Complete a separate Form 6 for each activity validated in Form 3. This chapter provides detailed instructions for completing Parts 1, 2, and 3 of Form 6. Chapter 5 provides instructions for Parts 4 and 5 of Form 6. Chapter 6 provides instructions for Part 6 of Form 6. The electronic version of this protocol contains an electronic version of Form 6. The form automatically calculates the activity's scores.

Although most of the information required to complete Form 6 may already be available in existing reports, you may want to walk around the municipality to document current conditions at each of the activity sites, as well as to talk to personnel in charge of each activity.

4-5.1 Form 6, Part 1—Describe the Activity, Its Potential Impacts, and Identify the Watershed or Waterbody

The following instructions will help you complete Part 1 of Form 6 (the instruction number corresponds to the block numbers on the form):

1. Enter name of activity. This name should be clear and concise.
2. Provide a detailed description of the activity and its operations. Note how often the site is used for the activity: continuous, daily, monthly, sporadically, etc. The amount helps you rate the activity's impact.
3. Enter the location of the activity. Refer to the watershed map quadrants or latitude and longitude, if applicable.
4. List the office responsible for operating the activity.

Electronic Version of Form 6

The electronic version of this protocol contains an electronic version of Form 6. The scores are automatically calculated using an MS Excel spreadsheet.

5. Enter a tracking number unique to the activity: a tracking number you currently use, a Standard Industrial Classification (SIC) number, or other number.
6. Describe current mitigation efforts or past restoration efforts in place at each activity. This can include a description of the type of equipment, the structural controls, or the management practices in place.
7. Estimate the annual operation and maintenance (O&M) costs for mitigation efforts described in Block 6. If exact figures are not available, provide a rough estimate.
8. Check all laws and regulations that regulate or permit the operation of the activity or its discharges. Refer to Appendix B, which contains a list of the environmental laws and regulations associated with typical municipal activities.
9. List the specific environmental permits or plans required by law that the activity must have to operate.
10. List the waterbody's name and 8-, 10-, or 12-digit HUC from Form 1.
11. Enter the WPS for that waterbody as determined on Form 2.
12. List the TMDL pollutants or 303(d) listed pollutants of concern that may be released by the activity. For each pollutant, choose "yes" if the TMDL exists or is planned to be online within 2 years. This information is available from Form 2. For each pollutant, also note if its release is based on an estimate (such as professional judgment) or if it has been determined from sampling results.
13. Check all of the activity's other potential impacts ("K" for known or "P" for potential). Refer to Appendix C, which contains a list of common activities and the typical environmental impacts associated with each.

4-5.2 Form 6, Part 2—Quantify the Activity's Impact and Determine the Total Activity Burden Score

The AIS enables you to develop a quantitative baseline of current activities that may contribute to waterbody impairments. This information is particularly useful for municipalities in areas where the state is developing TMDLs. In addition, the process also supports users who are attempting to develop an EMS by creating a prioritized list of municipal activities that have an environmental aspect and impact.

The scoring approach is based on EPA, DoD, and Department of Energy (DOE) risk ranking systems. The user develops the activity

impact “score” by considering the severity of the impact and its frequency. In general, users first, estimate the likelihood that a specific impact will occur (such as 1 chance in 100 events) or the frequency of an activity (such as number of car washes conducted in a year). Exhibit 4-1 contains four categories of likelihood or frequency (LF) and assigns a LF value (LF0, LF1, LF2, or LF3). Then, users estimate the severity (negligible to significant) of the impact if the event occurred using the severity (S) matrixes for each media (Exhibits 4-2 through 4-6) and select a corresponding S value (S0, S1, S2, or S3). Then using the selected LF value and S value, users can assign an activity impact score as shown in Exhibit 4-7. Mark the corresponding box for each applicable question on Part 2 of Form 6.

Users should rely on existing studies or professional judgment when selecting a score in Part 2 of Form 6. The following instructions provide the detailed steps for scoring the municipal activity’s impact to surface water, groundwater, air quality, critical habitat, cultural resources, health and safety, and compliance burden.

Exhibit 4-1. Definitions of Likelihood of Occurrence or Frequency of Event Categories

LF0	Negligible likelihood (such as one chance in a million events) of release or impact occurring, no known plan exists to conduct the activity, or the activity occurs less than once a decade
LF1	Improbable likelihood or low frequency (such as 1 chance in 100) of release or impact occurring, or the activity takes place less than once a year
LF2	Probable likelihood or low frequency (such as 1 chance in 10 events) of release or impact
LF3	Very likely or high frequency (at least 1 chance every 2 events or continuous) release or impact, such as a constant discharge

14. **Surface water impact.** For each activity, estimate the likelihood of impact occurring using Exhibit 4-1 and estimate the severity of the consequence using Exhibit 4-2 to select the appropriate AIS using Exhibit 4-7 for questions 14a–j. Then enter the corresponding answer on Form 6:
 - a. Does the activity result in a direct point source discharge to surface water that is regulated under the CWA (do not include a discharge from storm water runoff)?
 - b. Is the activity out of compliance with CWA regulations because it does not have an individual permit or is NOT included on the municipality’s permit?
 - c. If the activity is permitted, is it currently out of compliance with the permit standards?
 - d. Has the activity had past recurring non-compliance with permit standards and/or conditions?

- e. Does the activity have a discharge of storm water runoff from a “regulated” point source?
- f. Does the activity have storm water runoff from non-point sources?
- g. Are the pollutants discharged from this activity to surface water the same as those pollutants listed on the state/EPA 303(d) list (TMDL) for this waterbody?
- h. Does the activity drain to a waterbody that is a source of drinking water?
- i. Is the activity located in a State-identified Source Water Protection Zone?
- j. Does the activity adversely affect flow of a waterbody through restrictions on water withdrawal or discharge volumes?

Exhibit 4-2. Definitions of Severity Categories for Potential Impacts to Surface Water Quality	
S0	The activity has no impact on surface water
S1	Minimal impact. The activity results in a discharge of pollutant or other impairment that has minimal negative impact on surface waterbodies: it is temporary, contained immediately around activity, and does not result in a release of a 303(d) listed impairment to waters of the state
S2	Moderate impact. The activity causes discharge of pollutant or other impairment that has moderate impact on surface water, and the pollutant(s) of concern or impairment(s) is <ul style="list-style-type: none"> ▪ listed as a 303d pollutant or cause of waterbody impairment, and the impact is local in scale; or ▪ not listed as a 303d pollutant or cause of waterbody impairment, and the impact is temporary and contained within the activity boundaries; or ▪ not listed as a 303d pollutant or cause of waterbody impairment, and the impact is temporary and contained immediately around the activity, but the waterbody is a source for potable water
S3	Significant impact. The activity discharges a pollutant(s) or causes another impairment(s) that has a significant impact on surface water, including <ul style="list-style-type: none"> ▪ a discharge of a 303d or State listed impairment or causes an a 303d or state listed impairment that is persistent or an off-site impact; or ▪ the impact prevents a waterbody from meeting its intended uses

15. **Groundwater impact.** Use Exhibit 4-3 in conjunction with Exhibit 4-1 to select the appropriate color in Exhibit 4-7 for questions 15a–d. Then enter the corresponding answer on Form 6.
- Does the activity inject or have infiltration of a pollutant to groundwater?
 - Does the activity discharge pollutants that violate drinking water maximum contaminant limits (MCLs) or water discharge permit limits to groundwater (if permitted)?
 - Does the activity drain to groundwater that is a source of drinking water (aquifer or well)?
 - Is the activity within 300 feet of a drinking water well or within a wellhead protection zone?

Exhibit 4-3. Definitions of Severity Categories for Potential Impacts to Groundwater Quality	
S0	Activity reduces amount of parameter released to groundwater
S1	Minimal impact. The activity causes discharge of pollutant or negatively impacts flooding or water supply, but the discharge amount or negative impact is minimal
S2	Moderate impact. The activity causes discharge of pollutant or negatively impacts flooding or water supply, but the discharge or negative impact is on post, temporary in nature and parameter, and not listed as a 303d pollutant or cause of waterbody impairment
S3	Significant impact. The activity causes discharge of pollutant or negatively impacts flooding or water supply, but the discharge or negative impact is listed as a 303d pollutant, the aquifer is source water, the scale of damage is off-post, or the impact prevents the waterbody from meeting its intended purposes

16. **Air quality impact.** Use Exhibit 4–4 in conjunction with Exhibit 4-1 to select the appropriate color in Exhibit 4-7 for questions 16a–b. Then enter the corresponding answer on Form 6:
- Does the activity have non-permitted discharges to air that are also TMDL regulated pollutants?
 - Does the activity have a permitted discharge to air that is also considered a TMDL regulated pollutant? If so, is this air discharge in compliance with the CAA permit?

Exhibit 4-4. Definitions of Severity Categories for Potential Impacts to Air Quality	
S0	The activity reduces amount of parameter released to air
S1	Minimal impact. The activity causes discharge of pollutant or negatively impacts air quality, but the discharge amount or negative impact is minimal
S2	Moderate impact. The activity causes discharge of pollutant or negatively impacts air quality, but the discharge does not migrate off-post and complies with air standards
S3	Significant impact. The activity causes discharge of pollutant that negatively impacts air quality, the discharge migrates off-post, and the discharge is beyond guidelines set by air standards

Use Exhibit 4-5 in conjunction with Exhibit 4-1 to select the appropriate color in Exhibit 4-7 for questions 17–19. Then enter the corresponding answer on Form 6.

17. **Critical habitat impact.** Does the activity disturb sensitive/critical habitat or endangered species habitat?
18. **Cultural resources impact.** Does the activity adversely affect cultural resources or historic property?
19. **Health and safety impact.** Does the activity discharge pollutant(s) that pose a risk to worker/public health and/or safety?

Exhibit 4-5. Definitions of Severity Categories for Potential Impacts to Questions 17–19	
S0	The activity positively impacts the ecosystem, cultural resources, or health and safety parameters
S1	Minimal impact. The activity causes minimal negative impact
S2	Moderate impact. The activity causes moderate negative impact, but only on post
S3	Significant impact. The activity causes significant negative impact, regional in scale, or affects sensitive areas or endangered species on post, or the impact is on off-post habitats

20. **Municipal compliance burden impact.** Use Exhibit 4-6 in conjunction with Exhibit 4-1 to select the appropriate color in Exhibit 4-7 for question 20a–c. Then enter the corresponding answer on Form 6.
 - a. Will a new operation cause the activity to have a new pollutant discharge to water resources that will increase compliance requirements or liability?

- b. Does the activity require an environmental plan that calls for management of discharges to water resources? If yes, has the plan been implemented? If so, has the plan been unsuccessful in reducing discharges of pollutants to water resources?
- c. Is the activity currently out of compliance with other environmental laws or regulations (e.g., RCRA, FIFRA, CERCLA), or has it had recurring non-compliance for any discharge, spill, or injection of a pollutant to water resources?

Exhibit 4-6. Definitions of Severity Categories for Potential Impacts to Municipal Compliance Burden	
S0	No impact. The activity has no compliance requirement and requires no permit or plan
S1	Minimal impact. The activity is governed by environmental regulations, but has no regulatory requirement for a permit or plan to operate
S2	Moderate impact. The activity is governed by environmental regulations but has no regulatory requirement for a permit to operate, only a plan
S3	Significant impact. The activity is governed by environmental regulations and has a regulatory requirement for a permit and a plan to operate

Exhibit 4-7. Definitions of Impact Scores in Form 6	
Combined "S" and "L" response	Answer for Form 6
Yes or known significant impact (S3+L3 or S3+L2 or S2+L3)	3 points (red)
High probability or uncertain impact (S1+L3 or S2+L2 or S3+L1)	2 points (pink)
Low probability but uncertain impact (S3+L0, S2+L1 or S1+L1 or S1+L2)	1 point (yellow)
No known or negligible impact (L0 or S0 in any combination)	0 points (green)

21. Identify other activity regulatory concerns or issues and rate the impact.
22. Calculate the AIS by adding your answers to questions 14–21. Record the total in this block.
23. The TABS equals the sum of the WPS you recorded in Block 13 of Form 2 and the AIS. This approach is based on the hypothesis that an activity's total burden increases as the vulnerability of the ecosystem in which it operates increases.

Once you have calculated an activity's AIS and TABS, transfer these scores back into Form 1 to create a summary sheet of all activities and scores.

4-5.3 Form 6, Part 3: Assess Potential for Pollution Prevention Opportunities

This part of Form 6 allows you to identify activities that are candidates for elimination, outsourcing, consolidation, process reengineering, material substitution, or other P2 approaches. Candidate activities are ones that exhibit a relatively higher burden-to-municipal-need ratio. In other words, they cause a high environmental burden, but have a low municipal need. These are the activities that you should review for opportunities to reduce their impact by

- eliminating the activity,
- consolidating multiple activities,
- reengineering the activity, or
- implementing other pollution prevention approaches.

24. Determine the Municipal Need Score (MNS) by selecting the appropriate score:

- Score of 1. The activity is unrelated to the municipal functions or municipal operations would not be adversely impacted at all if the activity ceased operations.
- Score of 5. The activity is somewhat related to the municipal functions or municipal operations would be slightly adversely impacted if the activity ceased operations.
- Score of 10. The activity is critical to the municipal functions or municipal operations.

25. To determine the burden-to-municipal-need ratio, divide the TABS from Block 25 by the MNS from Block 23.

26. Check all the P2 options that may be appropriate for mitigating the impacts or compliance burden of the activity. Refer to Block 20 when making your selections.

The following chapters of this guide provide instructions on how to complete the remainder of Form 6.

Form 6. Municipal Activity Data Entry Sheet - Part 1

Part 1. Describe the Activity, its Potential Impacts, and Identify its Watershed or Waterbody

1. Name of activity:	2. Describe activity:																																			
3. Location(s):																																				
4. Responsible office:	5. Unique activity ID# or SIC#:																																			
6. Describe current mitigation efforts and past restoration efforts (Existing or Planned):	7. Estimate annual cost of mitigation efforts:																																			
8. Check the laws that regulate/permit the operation of the activity: <input type="checkbox"/> CWA <input type="checkbox"/> RCRA <input type="checkbox"/> CAA <input type="checkbox"/> SDWA <input type="checkbox"/> EPCRA <input type="checkbox"/> NCA <input type="checkbox"/> NHPA <input type="checkbox"/> TSCA <input type="checkbox"/> FIFRA <input type="checkbox"/> ESA <input type="checkbox"/> CZMA <input type="checkbox"/> NEPA <input type="checkbox"/> State: _____ <input type="checkbox"/> Local: _____ <input type="checkbox"/> Other: _____	9. List required permits and plans: a. _____ b. _____ c. _____ d. _____																																			
10. Receiving waterbody name and 10 th -12 th level HUC #, Form 1:	11. WPS from Form 2:																																			
12. List the TMDL regulated pollutants or 303(d) listed pollutants of concern released by activity from Form 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Pollutant of Concern</th> <th colspan="2" style="width: 10%;">TMDL?</th> <th style="width: 10%;">Sampled</th> <th style="width: 10%;">Estimated</th> </tr> </thead> <tbody> <tr> <td>303(d) Impairment 1:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> <tr> <td>303(d) Impairment 2:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> <tr> <td>303(d) Impairment 3:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> <tr> <td>303(d) Impairment 4:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> <tr> <td>303(d) Impairment 5:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> <tr> <td>303(d) Impairment 6:</td> <td style="text-align: center;">yes</td> <td style="text-align: center;">no</td> <td></td> <td></td> </tr> </tbody> </table>	Pollutant of Concern	TMDL?		Sampled	Estimated	303(d) Impairment 1:	yes	no			303(d) Impairment 2:	yes	no			303(d) Impairment 3:	yes	no			303(d) Impairment 4:	yes	no			303(d) Impairment 5:	yes	no			303(d) Impairment 6:	yes	no		
Pollutant of Concern	TMDL?		Sampled	Estimated																																
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303(d) Impairment 2:	yes	no																																		
303(d) Impairment 3:	yes	no																																		
303(d) Impairment 4:	yes	no																																		
303(d) Impairment 5:	yes	no																																		
303(d) Impairment 6:	yes	no																																		
13. Check activity's other known or potential pollutant releases or impairments (Check K for Known or P for Potential and check all that apply.)	<table style="width: 100%;"> <tr> <td style="width: 25%;"> K/P <input type="checkbox"/> Release nutrient <input type="checkbox"/> Release BOD/COD <input type="checkbox"/> Release inorganic <input type="checkbox"/> Release metals <input type="checkbox"/> Release POLs <input type="checkbox"/> Uncontrolled storm water runoff <input type="checkbox"/> Release pesticides </td> <td style="width: 25%;"> K/P <input type="checkbox"/> Release TSS <input type="checkbox"/> Cause erosion <input type="checkbox"/> Cause thermal pollution <input type="checkbox"/> Release pathogens <input type="checkbox"/> Disrupt potable supply <input type="checkbox"/> Release explosives <input type="checkbox"/> Potential spill <input type="checkbox"/> Release VOC/SVOC </td> <td style="width: 25%;"> K/P <input type="checkbox"/> Release SOx to air <input type="checkbox"/> Release NOx to air <input type="checkbox"/> Hazardous air pollutants <input type="checkbox"/> Greenhouse gas emission <input type="checkbox"/> Release PM 10 to air <input type="checkbox"/> Violate noise standards </td> <td style="width: 25%;"> K/P <input type="checkbox"/> Decrease riparian buffer <input type="checkbox"/> Introduce invasive species <input type="checkbox"/> Decrease wetlands <input type="checkbox"/> Decrease fish spawning range <input type="checkbox"/> Cause in-stream scouring <input type="checkbox"/> Cause flooding </td> </tr> </table>	K/P <input type="checkbox"/> Release nutrient <input type="checkbox"/> Release BOD/COD <input type="checkbox"/> Release inorganic <input type="checkbox"/> Release metals <input type="checkbox"/> Release POLs <input type="checkbox"/> Uncontrolled storm water runoff <input type="checkbox"/> Release pesticides	K/P <input type="checkbox"/> Release TSS <input type="checkbox"/> Cause erosion <input type="checkbox"/> Cause thermal pollution <input type="checkbox"/> Release pathogens <input type="checkbox"/> Disrupt potable supply <input type="checkbox"/> Release explosives <input type="checkbox"/> Potential spill <input type="checkbox"/> Release VOC/SVOC	K/P <input type="checkbox"/> Release SOx to air <input type="checkbox"/> Release NOx to air <input type="checkbox"/> Hazardous air pollutants <input type="checkbox"/> Greenhouse gas emission <input type="checkbox"/> Release PM 10 to air <input type="checkbox"/> Violate noise standards	K/P <input type="checkbox"/> Decrease riparian buffer <input type="checkbox"/> Introduce invasive species <input type="checkbox"/> Decrease wetlands <input type="checkbox"/> Decrease fish spawning range <input type="checkbox"/> Cause in-stream scouring <input type="checkbox"/> Cause flooding																															
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Form 6. Municipal Activity Data Entry Sheet (Continued) - Part 2						
Part 2. Quantify the Activity's Impact and Determine the Total Activity Burden Score						
Answer the following questions to develop the activity's impact score (AIS): (Use your own professional judgment, technical studies, monitoring data, and the instructions to answer the questions.)			Yes or known significant impact = 3 pts	High probability or uncertain impact = 2 pts	Low probability but uncertain impact = 1 pt	No or negligible impact = 0 pt
14. Surface Water Impact	a. Does the activity result in a direct point source discharge to surface waters that is regulated under the CWA (do not include a discharge from storm water runoff in this question)?					
	b. Is the activity out of compliance with CWA regulations because it does not have an individual permit or is NOT included on the municipal permit?					
	c. If the activity is permitted, is it currently out of compliance with the permit standards?					
	d. Has the activity had past recurring non-compliance with permit standards and/or conditions?					
	e. Does the activity have a discharge of storm water runoff from a "regulated" point source?					
	f. Does the activity have storm water runoff from non-point sources?					
	g. Are the pollutants discharged from this activity to a surface water the same as those pollutants listed on the state/EPA 303d list (TMDL) for this waterbody?					
	h. Does the activity drain to a waterbody that is a source of drinking water?					
	i. Is the activity located in a state identified Source Water Protection Zone?					
	j. Does the activity adversely affect flow of a waterbody with restrictions on water withdrawal or discharge volumes?					
15. Groundwater Impact	a. Does the activity inject or have infiltration of a pollutant to groundwater?					
	b. Does the activity discharge pollutants that violate drinking water maximum contaminant limits (MCLs) or water discharge permit limits to groundwater (if permitted)?					
	c. Does the activity drain to groundwater that is a source of drinking water (aquifer or well)?					
	d. Is the activity within 300 feet of a drinking water well or within a wellhead protection zone?					
16. Air Quality Impact	a. Does the activity have non-permitted discharges to air that are also TMDL regulated pollutants?					
	b. Does the activity have a permitted discharge to air that is also considered a TMDL regulated pollutant? If so, is this air discharge in compliance with the CAA permit?					
17. Critical Habitat Impact	Does the activity disturb sensitive/critical habitat or endangered species habitat?					
18. Cultural Resource Impact	Does the activity adversely affect cultural resources or historic property?					
19. Health and Safety Impact	Does the activity discharge pollutant(s) that pose a risk to worker/public health and/or safety?					
20. Compliance Burden Impact	a. Will a new municipal operation cause the activity to have a new pollutant discharge to water resources that will increase compliance requirements or liability?					
	b. Does the activity require an environmental plan that requires management of discharges to water resources? If yes, has the plan been implemented? If so, has the plan been unsuccessful in reducing discharges of pollutants to water resources?					
	c. Is the activity currently out of compliance with other environmental laws or regulations (e.g., RCRA, FIFRA, CERCLA) or has it had recurring non-compliance for any discharge, spill, or injection of a pollutant to water resources?					
21. Identify other activity regulatory concerns or issues and rate the impact.	a.					
	b.					
22. AIS Sum scores from questions 14 to 21						
23. Total Activity Burden Score (TABS) = AIS+WPS (from Form 2):						

Form 6. Municipal Activity Data Entry Sheet (Continued) - Parts 3–6

Part 3. Assess Potential for Pollution Prevention Opportunities

24. Activity's Municipal Need Score. Select either 1 (the activity is unrelated to the municipality or municipal operations would not be adversely impacted at all if the activity ceased operations), 5 (the activity is somewhat related to the municipal or municipal operations would be slightly adversely impacted if the activity ceased operations), or 10 (the activity is critical to the municipal operations)	10	5	1
25. Calculate the activity's current Burden to Municipal Need Ratio which equals the TABS from Block 23 / MNS from Block 24. [Higher ratios identify high burdens, but activities with lower importance. These activities are excellent candidates for the P2 evaluations listed in Block 26].			
26. Check the following P2 options that are appropriate for mitigating the impacts or compliance burden of the activity: <input type="checkbox"/> eliminate activity <input type="checkbox"/> consolidate activity <input type="checkbox"/> outsource activity <input type="checkbox"/> implement process change <input type="checkbox"/> change materials			

Part 4. Determine Project Objectives

27. Are enhanced mitigation efforts needed for this activity? Specifically, do you want to:	yes	no
a. Reduce the amount of pollutants entering receiving waters?	yes	no
b. Reduce runoff velocities or mimic predevelopment runoff flow volumes?	yes	no
c. Improve reliability and ease of maintenance of existing BMPs?	yes	no
d. Comply with permit requirements (for pollutant removal or flow control)?	yes	no
e. Reduce lifecycle costs of existing operations or BMPs?	yes	no
f. Restore natural habitat	yes	no
g. Other (describe) _____	yes	no

Part 5. Select Project BMP, Estimate Costs, and Source of Funds

28. Describe selected mitigation project or BMP: If yes to #27, provide title of proposed BMP or control technology:	29. Cost Data	\$
	Estimated total startup costs	
	a. Estimated planning, design & permitting costs	
	b. Estimated purchase/construction costs	
	Estimated O&M costs	
30. Estimate a reduction in TABS, assuming successful implementation of the enhanced mitigation effort uses the same scoring sheet as your original TABS (Part 2). Enter new TABS here.		
31. Calculate cost effectiveness of proposed project = revised TABS score / total start costs		
32. Provide reference to detailed project sheet		
33. List most appropriate source of funds (e.g., O&M):		
34. Is project eligible for other funds (e.g., state grants, EPA grants, grants from other organizations, etc.):		

Part 6. Identify Project Lead and Potential Project Partners

35. Project lead office:		36. Contact phone:	
37. Point of contact name:		38. Contact e-mail:	
39. List potential partners			
Organization name:	Point of contact:	Contact phone:	Role in project:
40. Attach a picture of the location, impairment, or activity			
Form created by:	Date form created:	Form revised by:	Date form revised: