4.0 Pond Branch Watershed

The Pond Branch Watershed consists of four watershed management areas (WMAs) as listed below:

1. Clark
2. Mine Run
3. Pond
4. Potomac

WMAs in the Pond Branch Watershed are shown in Figure 4.1. As shown in the figure, all of the WMAs are located in Fairfax County. The following information is provided for each WMA in the subsequent sections of this chapter:

1. WMA Characteristics
2. Existing and Future Land Use Information
3. Field Reconnaissance and Stream Physical Assessment Information
4. WMA Characterization
5. STEPL Modeling
6. HEC-RAS Modeling
7. Subwatershed Ranking

Table 4.1 illustrates the total area of each WMA, the current impervious conditions and the extent and type of stormwater treatment within each WMA.

Table 4.1 Pond Branch Watershed WMA Summaries

WMA Name	Total Area (acres)	Impervious Current Condition (acres)	Percent Impervious	Current Treatment Types			
				Quantity (acres)	Quality (acres)	Quantity/Quality (acres)	None (acres)
Clark	1,759.4	98.8	5.6	13.6	0.5	6.5	1,738.8
Mine Run	1,633.4	103.7	6.3	15.5	0.3	-	1,617.6
Pond	741.6	48.1	6.5	5.9	0.7	-	735
Potomac	1,269.7	38.4	3	0.4	0.2	0.8	1,268.3
Watershed Totals	**5,404.1**	**289**	**5.3**	**35.4**	**1.7**	**7.3**	**5,359.7**

Figures for Chapter 4 are provided in the beginning of the chapter and are followed by a detailed discussion of each WMA in Sections 4.1 through Section 4.4. Section 4.5 includes a discussion of SWMM modeling results, including a SWMM Peak Flow Map for the 2-year and 10-year storm event.

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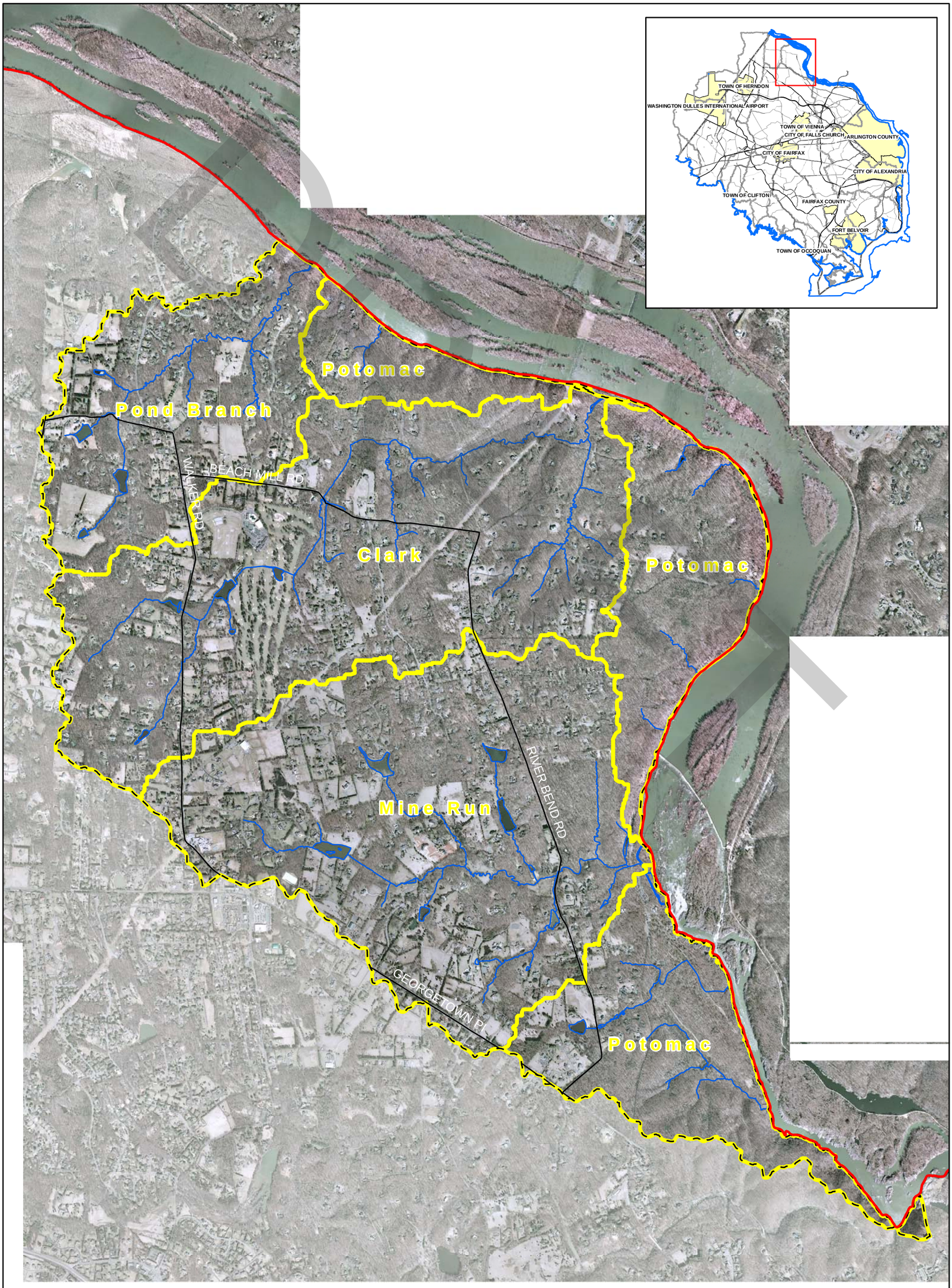
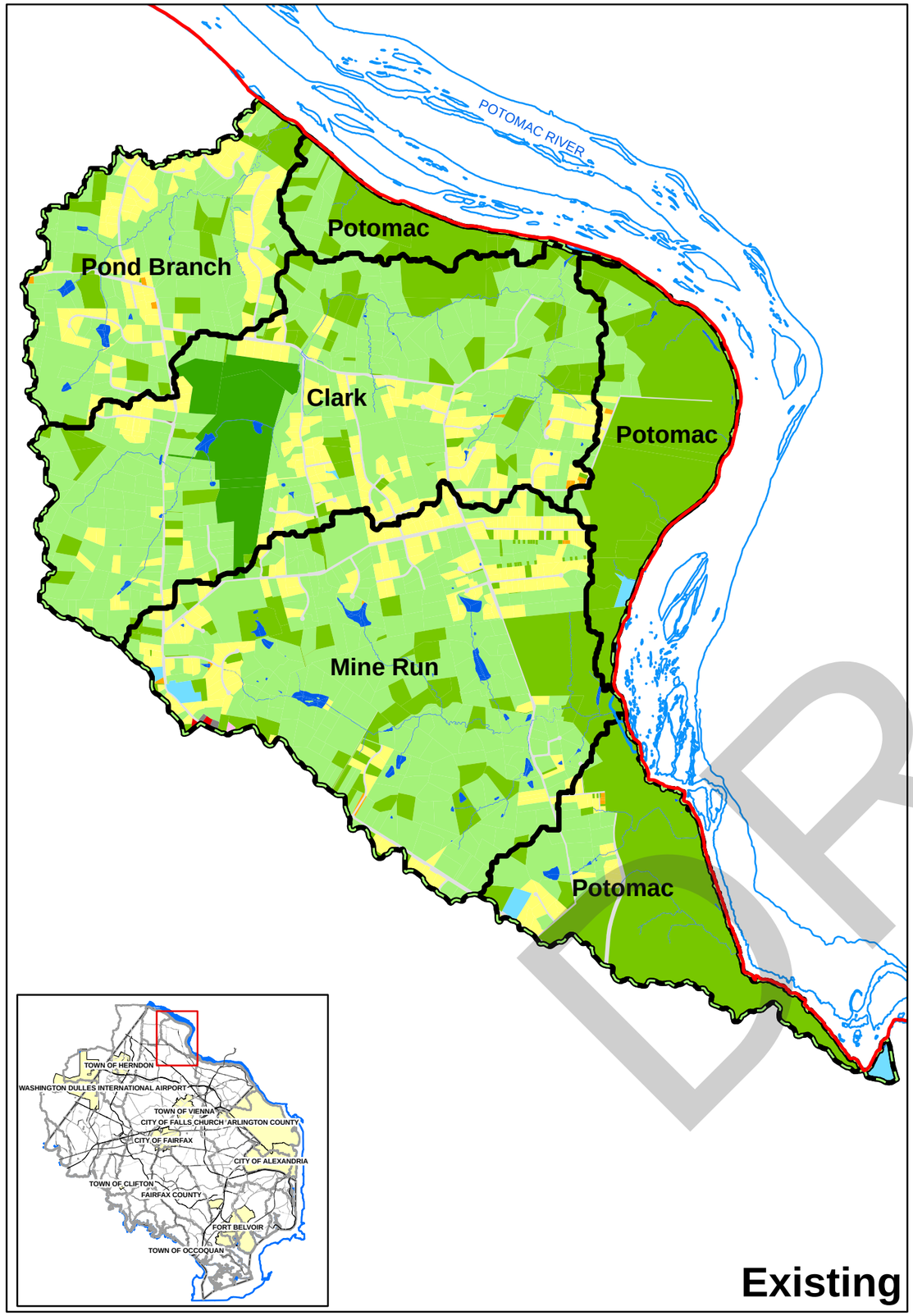


N

0 0.1 0.2 0.3 0.4 Miles

Roads
Perennial Streams
WMA Boundary
Pond Branch Watershed Boundary
County Boundary

Figure 4.1
Pond Branch Watershed Management Area Map



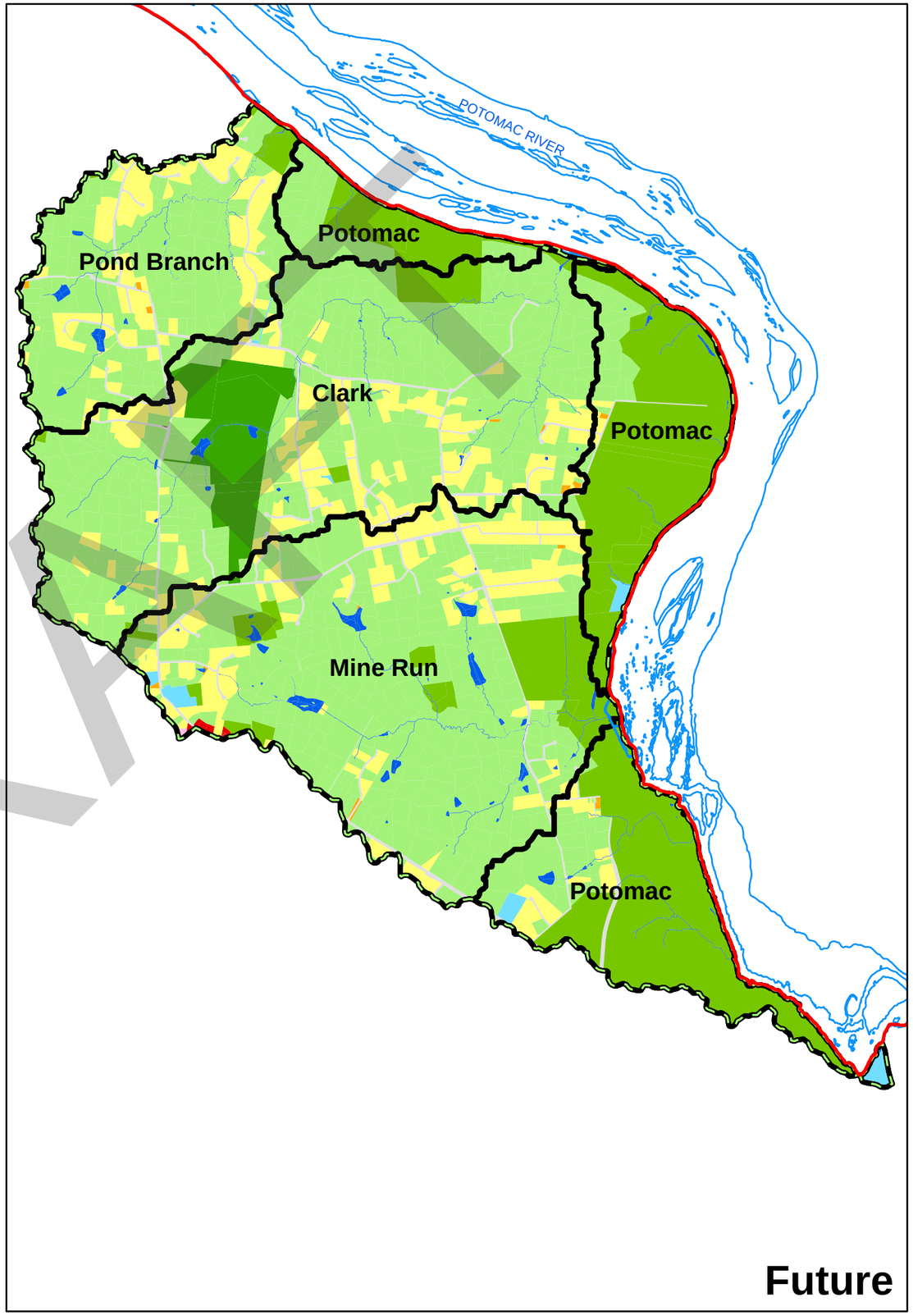


Figure 4.2
Existing and Future Land Use for Pond Branch Watershed

WMAs
Watersheds
County

Land Use

- ESR
- GC
- HDR
- HIC
- IND
- INT
- LDR
- LIC
- MDR
- OS
- TRANS
- WATER

N

0 0.25 0.5 Miles

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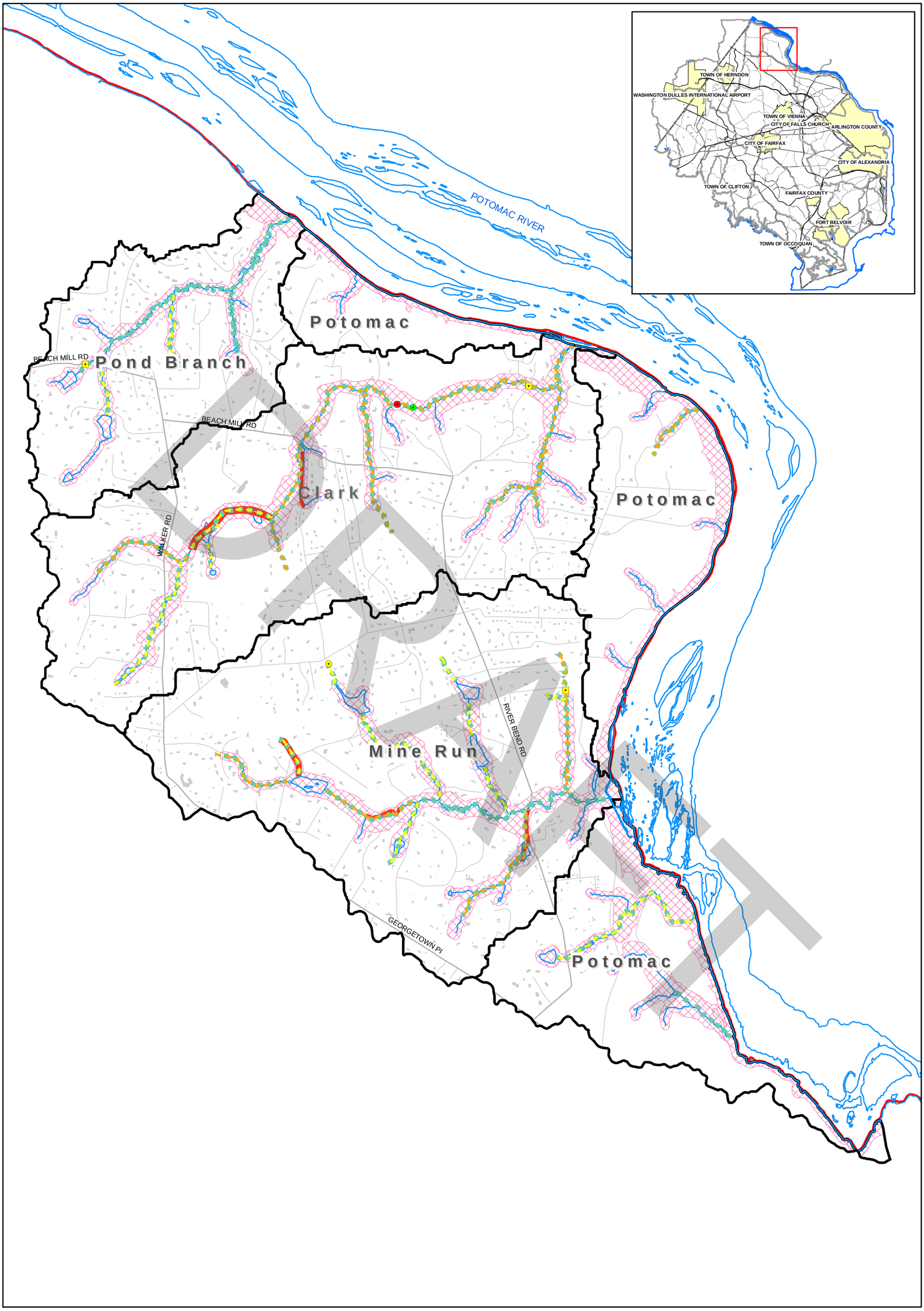


N

0 0.1 0.2 0.3 0.4 Miles

Head Cut Height
- 0.5 - 1 ft
- 1 - 2ft
- > 3ft

Utility Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

Dump Site Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

Obstruction Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

Crossing Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

Ditch Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

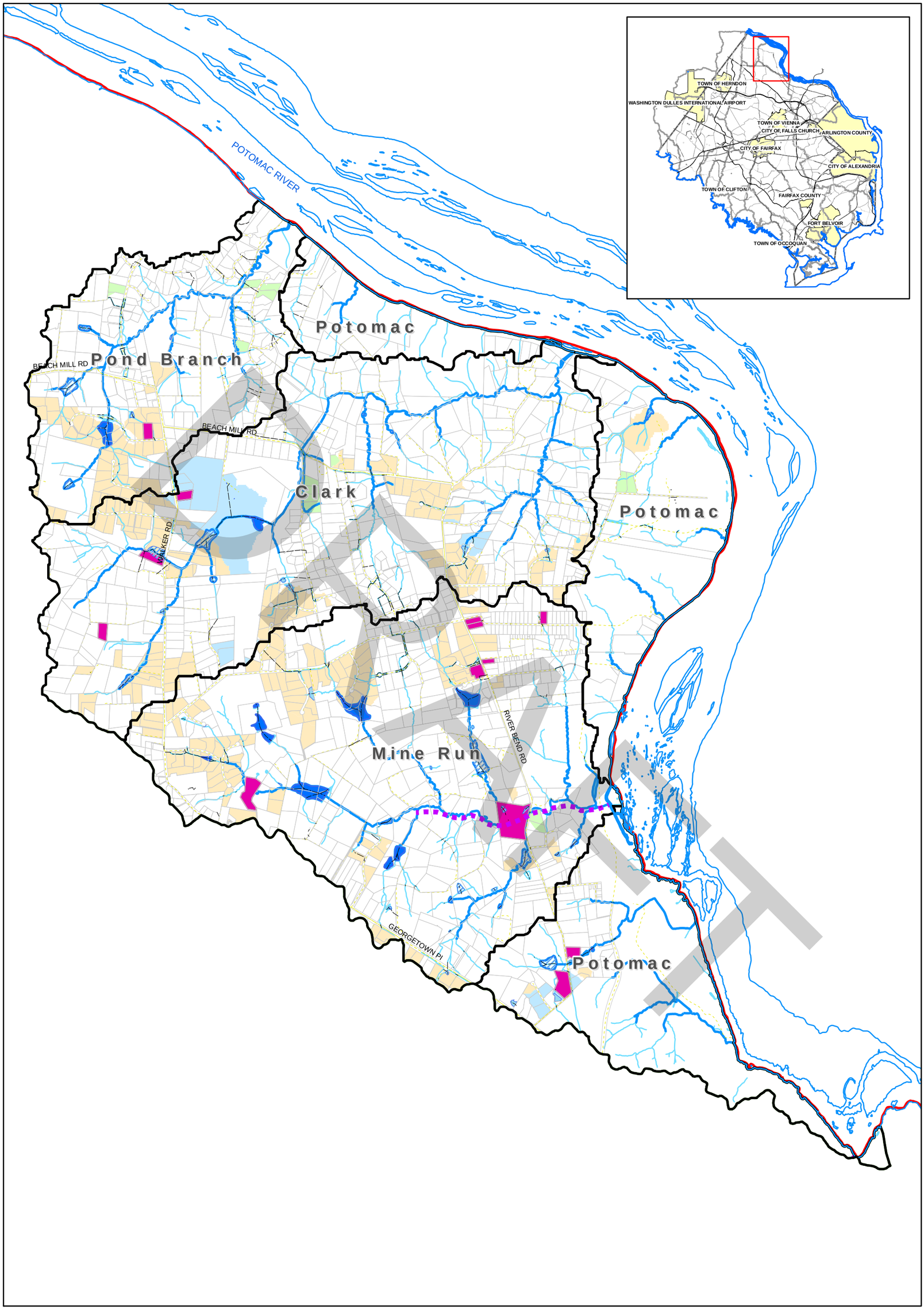
Pipe Impact
- Minor to Moderate
- Moderate to Severe
- Severe to Extreme

Channel Evolution Model
- CEM Type 3 - Widening

- Poor to Very Poor Habitat
- Fair Habitat

ImpactScor
- Deficient Buffer
- Severe to Extreme Erosion
- Resource Protection Areas

Figure 4.3
Stream Condition Map for Pond Branch Watershed



N

0 0.2 0.4 Miles

303d Impaired Waters
Perennial Streams
Non-Perennial Drainage
Stormwater Infrastructure
Drainage Complaints

Regional Ponds
Completed
Active
Incomplete

Stormwater Facilities
Wet Pond
Dry Pond
All Other Facilities

Stormwater Controls
Detention Only
Quality & Quantity
Quality Only

Figure 4.4
Stormwater Infrastructure Map for Pond Branch Watershed