

COVES DYKE AND FLOODGATE

Dyke: Coves Dyke and Floodgate
Weather: Sunny, 25 °C
Immediate Action Required •

Date: June 14, 2004
Inspected By: N.Oliveira, S.Jeater
Further Investigative Work •

General Information	
<u>Section Inspected:</u> Complete <input checked="" type="checkbox"/> Section • Specify: _____ to _____ m	Overall Condition Rating: 4 Comments: Minor erosion noted not expected to affect performance. Verification of floodgate structure operation not completed at this time.
<u>Adjacent Property Use:</u> Residential • Parkland <input checked="" type="checkbox"/> Commercial • Industrial •	Comments: Greenway Park borders the structure.
Dyke Facing	
<u>Dyke Face Material:</u> Concrete • Gabion • Earthfill <input checked="" type="checkbox"/> Other • Specify: Condition Rating: 4 Comments: Predominantly heavy vegetation consisting of trees, bushes and wild grass. Some cobbles and concrete rubble also noted (photo 9) adjacent to floodgate and underneath corrugated storm pipe.	<u>Structural Condition (Dyke Face):</u> Erosion <input checked="" type="checkbox"/> Damage (impact, cracks, etc) • Movement (including unevenness, slipping, bulging or slumping) • Specify type: Condition Rating: 4 Comments: Minor erosion noted along tree roots at waters edge.
<u>Toe:</u> <u>Toe Protection Material</u> (concrete, gabion, earth or other) Specify: Earth, some cobbles near floodgate. Erosion Yes <input checked="" type="checkbox"/> No • Condition Rating: 4 Comments: Minor erosion noted near floodgate (St. 0+090). In general, no signs of significant erosion further downstream.	<u>Joints:</u> (not applicable to earthfill dykes) Sealant Present Yes • No • If yes, condition rating: Vegetation (in joints) Yes • No • Comments: Not applicable.
<u>Vegetation:</u> None • Full <input checked="" type="checkbox"/> Partial • Type: Primarily trees with shrubs, bushes, wild grass, etc. Comments: Vegetation well established along side slopes of dyke. Some large trees/branches have broken and entered channel (~St. 0+080, see photos 27 to 29). Minor uprooting near edge of water. Signs of recent flooding near toe of dyke (photo 38) evident on nearby vegetation.	<u>Water Infiltration:</u> (look for where water can leak behind structure) Yes • No <input checked="" type="checkbox"/> If yes, due to: Joints • Cracks • Liner • Other (specify) • Comments:
<u>Additional Information:</u> Access Available Yes • No • Estimated Water Depth: Variable ~ 10 to 15cm Comments: Access via steep dirt pathways only along the west side (up to St. 0+090). Limited access along the east branch due to steep slopes.	
Top of Dyke	
<u>Dyke Top Material:</u> Concrete • Asphalt • Earth <input checked="" type="checkbox"/> Rip Rap • Other • Specify: Condition Rating: 4 Comments: Well vegetated (trees and bush).	<u>Structural Condition (Top of Dyke):</u> Erosion (behind wall, etc.) • Damage (vandalism, etc) • Movement (including unevenness, heaving or settlement) • Specify type: Condition Rating: 4 Comments: No noticeable signs of erosion.
<u>Pedestrian Access:</u> Sidewalk • Pathway • None <input checked="" type="checkbox"/> Other • Specify: If present, width of access way: Condition Rating (if present): Comments: Top of dyke characterized primarily by combination of grass and dense vegetation.	<u>Protective Barrier:</u> Fence • Guard Rail • None <input checked="" type="checkbox"/> Other • Specify: Condition Rating (if present): Comments:

Top of Dyke - Continued	
<p><u>Joints</u> : (not applicable to earthfill dykes) Sealant Present Yes • No • If yes, condition rating: Vegetation (in joints) Yes • No • Comments: Not applicable.</p>	<p><u>Drainage Conditions:</u> (ponding or low areas present) Good ✓ Poor • Comments: Drainage generally south to north, down the slope.</p>
<p><u>Illumination:</u> (check for lighting present along the top of the dyke) Yes • No ✓ Condition Rating: Comments:</p>	<p><u>Vegetation:</u> None • Full ✓ Partial • Type: Trees and shrubs/bush adjacent to grass. Comments: Vegetation generally well maintained along the west branch. Wild grass and vegetation typical along the top of the east branch.</p>
<p><u>Additional Information:</u> Comments: Top of dyke visually separated from area directly behind via dense vegetation.</p>	
Area behind the Dyke (immediately adjacent)	
<p><u>Predominant Material:</u> Concrete • Asphalt ✓ Earth • Grass ✓ Other ✓ Specify: Granular Condition Rating: 4 Comments: Predominantly manicured grass along the west branch with an asphalt pathway immediately adjacent (photo 56). East branch consists of wild grass with a gravel pathway immediately adjacent.</p>	<p><u>Drainage Conditions:</u> (ponding or low areas present) Good ✓ Poor • Comments: Drainage generally south to north and down slope. Are catchbasins present? Yes • No ✓ If yes, condition rating: Comments:</p>
<p><u>Vegetation:</u> None • Full ✓ Partial • Type: Comments: See above.</p>	<p><u>Accessibility:</u> (check for access areas behind the dyke only) Sidewalks • Pathways ✓ Roads • None • Condition Rating (if present): 4 Comments: Asphalt pathway immediately adjacent to grass along the west branch (St. 0+000 to ~0+120). Note minor asphalt settlement near 0+120 (photo 60). From St. 0+120 onwards (i.e. east branch), gravel pathway is present adjacent to wild grass (photo 57).</p>
<p><u>Protective Barrier:</u> Fence • Guard • None ✓ Rail Other • Specify: If fence, list type and ownership (i.e. private or city): Condition Rating (if present): Comments:</p>	<p><u>Illumination:</u> (check for lighting present behind the dyke) Yes • No ✓ Condition Rating: Comments:</p>
Storm Sewers/Outlet Structures	
<p>Yes ✓ No • (if no, proceed to next section) If yes, type of structure (i.e. outlet, headwall, drainage pipe, channel or flush): Specify: Concrete headwall with floodgate (photo 8) at ~St. 0+095, storm outlet pipe along dyke face at ~St. 0+090 (photo 1), corrugated drainage pipe outlet at ~St. 0+120 (photo 60). Condition Rating: 4 Comments: Verification of floodgate operation not included in this assessment.</p>	<p><u>Outlet:</u> (check for presence of gates or grates at the outlet) Flap Gate Yes • No • Safety Gate Yes ✓ No • Condition Rating: 4 Comments: Safety grate relates to floodgate structure.</p>
<p><u>Outlet Flow:</u> (check for condition of channel downstream from pipe, obstructions within pipe, etc.) Obstructions Yes • No ✓ Downstream Erosion Yes ✓ No • Comments: Minor erosion noted near floodgate and below discharge of PVC storm outlet.</p>	<p>General Comments: Lack of sufficient protection at outlet to PVC storm pipe may result in erosion along dyke face (~St. 0+090).</p>

RATING SYSTEM

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|---|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <i>Unsafe Condition</i> | Structure (or element) in very poor or unsafe condition which may pose public safety hazard. |
| 2 | <i>Poor Condition</i> | Structure (or element) in poor condition with significant deterioration noted. Deteriorations noted may impact on integrity and may require significant capital cost to bring to fair to poor condition rating. No safety hazard noted. |
| 3 | <i>Fair/Poor Condition</i> | Structure (or element) condition varies from fair to poor with some signs of significant deterioration in localized areas. Able to perform function, but at reduced capacity. |
| 4 | <i>Fair Condition</i> | Structure (or element) in fair condition with no visible signs of significant deterioration. Able to perform intended function with no apparent hindrance. |
| 5 | <i>Good Condition</i> | Structure (or element) in good condition with minor deterioration. Able to perform intended function with no apparent hindrance. |

