

Appendix D: Impacted Stream Characteristics and Plan Criteria

Subwatershed Category: Impacted Stream	
Description:	Subwatershed has 10 to 25% impervious cover, and monitoring indicates a decline in physical, biological or water quality indicators. Subwatershed may be “best attainable” condition given previous disturbances.
Goal:	<ol style="list-style-type: none"> 1. Limit the degradation of stream habitat quality. 2. Maintain “good” biological community (fishable/swimmable).
Subwatershed Planning Objectives:	<ul style="list-style-type: none"> • Reduce the frequency of post-development bankfull and subbankfull flooding. • Maintain channel stability. • Provide maximum removal of designated pollutants of concern (especially bacteria).
Special Watershed Analyses:	<ul style="list-style-type: none"> • Impervious cover mapping. • Mapping of sensitive areas. • Storm water and floodplain modeling. • Stream system monitoring using a rapid technique (e.g., Rapid Stream Assessment Technique (RSAT). (Galli, 1996)
Indicators of Success:	<ul style="list-style-type: none"> • Biological and physical indicators of stream quality. • Meeting bacterial standards for dry weather contact recreation.
Unique Stakeholders and Institutions:	<ul style="list-style-type: none"> • Storm water utilities, local government agencies, neighborhood associations.
Key Issues to Consider:	<ul style="list-style-type: none"> • Are local development review, inspection or maintenance programs adequate to implement the program?
Example Plan:	Johnson Creek Resources Management Plan, Portland OR.
Subwatershed Plan Criteria: Impacted Stream	
Watershed Planning	<ul style="list-style-type: none"> • Set upper limit on watershed impervious area (approx. 25%). • Limit on-site impervious cover (ex. Low impact development, skinny streets, reduce parking ratios). • Utilize Traditional Neighborhood Development (TND) or Transit Oriented Development (TOD).
Land Conservation	Identify and regulate development on or adjacent to steep slopes, wetlands, floodplain, forest conservation areas, and critical habitat areas.
Aquatic Buffers	<ul style="list-style-type: none"> • Use standard three-zone stream buffer. • Restrict activity along streamside zone. • Design buffer crossings to allow storm and fish passage.
Storm water Best Management Practices	<ul style="list-style-type: none"> • Place strong emphasis on channel protection criteria (e.g., 1 year 24hour ED), as well as recharge and over bank flooding. • Disconnect impervious cover where appropriate. • Avoid hard conveyance systems. • Use regional Storm water ponds.*
Non-storm water Discharges	<ul style="list-style-type: none"> • Identify and correct illicit connections. • Reduce overflows and infiltration/inflow of sanitary sewage.
Watershed Stewardship Programs	<ul style="list-style-type: none"> • Promote low input lawn/auto care. • Increase watershed awareness through education (e.g., volunteer monitoring, stream walks). • Storm drain stenciling.
Unique Tools	<ul style="list-style-type: none"> • Cluster development. • Forest conservation. • Clearing and grading restrictions. • Bioengineering for channel stability.

Source: “Program C: Basic Methods to Prepare Watershed Protection Plans,” Watershed Protection Institute Manual (provided at March 28 – April 1, 2005 training session). Section C, Center for Watershed Protection.

*Note: Use of regional storm water ponds needs to be developed in conjunction with IDEM for most effective use.