

SALMON-SAFE CERTIFICATION STANDARDS FOR PARKS & NATURAL AREAS

VERSION 5.4

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INTRODUCTION

The Salmon-Safe Certification Standards for Parks & Natural Areas is a guide for park management agencies interested in maintaining park systems that demonstrate environmental stewardship by protecting sensitive aquatic and upland resources, and enhancing salmon habitat.

Since 1996, Salmon-Safe has successfully defined and promoted ecologically sustainable farming practices that protect water quality and aquatic biodiversity throughout the Pacific Northwest. The program has certified more than 65,000 acres of farmland and promoted Salmon-Safe products in more than 250 supermarkets throughout the western United States. Salmon-Safe has been evaluated by Consumer's Union, publisher of Consumers Report, and received high marks for its transparency and objectivity.

In 2000, Salmon-Safe partnered with the City of Portland with the idea of applying our Salmon-Safe label to urban restoration efforts and land management practices that help preserve the Willamette River and its tributaries in the city. After a three-year project development effort with the city, Salmon-Safe rolled out the nation's first park and natural area certification program focused on the protection of water quality and fish habitat. As Salmon-Safe's first non-agricultural certification initiative, these standards have been the basis for a series of urban-oriented standards by Salmon-Safe with an emphasis on landscape-level conservation and protection of biological diversity including corporate & university campuses (2005), large-scale residential development (2009) and golf course management (2009).

Based on more than a decade of work with 350 urban and agricultural landowners across the Pacific Northwest, Salmon-Safe brings an innovative project-specific, collaborative, peer-reviewed approach to park system certification that is unique among certification programs. Salmon-Safe views the evaluation and certification process as a collaborative effort between themselves and the candidate park agency. All certification standards and performance requirements are performance-based, not prescriptive.

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SYSTEM-WIDE CERTIFICATION

EVALUATION PROCESS FOR CERTIFICATION

Scope of the Evaluation Process: A Focus on Both System-Wide Aspects and Individual Park Management

The evaluation process for Salmon-Safe park certification features an in-depth assessment of the park system's overall management policies and operations related to protection and restoration of water quality and fish habitat. This system-wide evaluation is augmented by a field level assessment of a sub-sample of individual parks. Both system-wide and park evaluations are conducted using a set of standards (the "Standards") to evaluate whether the management of candidate parks is consistent with best management practices for avoiding harm to stream ecosystems. Restoration and enhancement projects on parklands are also assessed in the field to determine if significant progress is occurring, system wide, to address existing habitat deficiencies.

Part A of the Certification Standards lists the general standards that must be met by the park system for certification (General Standards). Part B of the Certification Standards lists additional standards and associated performance requirements that are specific to six management categories that relate to the habitat needs of salmonids (Habitat Specific Standards).

The Evaluation Team

System-wide and individual park assessments are conducted by a team of two to four qualified, independent, and credible experts hired by Salmon-Safe. The evaluation team is well-versed in aquatic ecological science, as well as park management. Salmon-Safe makes the final decision on the composition of the team, but the selection process includes input from the park system staff. In building an assessment team, the goal is to maximize the credibility of the evaluation process by employing individuals with recognized regional expertise in relevant disciplines that are capable of rendering independent and objective judgments.

The Evaluation Process

The evaluation process is geared towards one simple objective: to inform the evaluation team as fully as possible about the status of park management so as to enable a robust judgment as to the level of conformance to the Certification Standards. The evaluation team assesses current system-wide and field-level park management against a defined set of evaluation standards that represent best park management practices. The team also evaluates the extent to which existing park design and infrastructure protect and restore aquatic ecosystems within the context of park department goals of maintaining parks for public use and provision of recreational opportunities.



The team evaluates if a park system complies with the Certification Standards by:

- 1) reviewing overall management policies and operations of the park system,
- 2) field assessment of a sub-sample of randomly selected individual parks, and
- 3) field assessment of a sub-sample of representative restoration projects.

To obtain an understanding of park management system-wide, the evaluation team interviews park managers and staff and inspects the summary reports and inventories required for certification. These documents are provided by the park system. The list of required documents is attached in Appendix A.

To field verify the information on system-wide park management, the evaluation team conducts field reviews at a sub-sample of selected parks. The parks chosen for field evaluation are selected randomly and represent a minimum of a) 10 percent of individual parks in the park system and b) 10 percent of total park system acreage¹. Because some management actions conducted at a specific park will not be evident to reviewers (such as pesticide application methods), park staff will accompany the evaluation team to describe recent management history at each park.

The evaluation team uses all of the standards and performance requirements in this document to evaluate whether the park system as a whole will be awarded certification. However, during the field verification portion of the evaluation, the team only uses Part B, Habitat Specific Standards, to evaluate management practices at the site level. Part A, the General Standards, and Part B, are both used in the summary evaluation at the system-wide level.

The requirements related to infrastructure are generally not addressed at individual park sites; however, the team does select a sub-sample of restoration projects for field review. The team evaluates restoration projects to augment their system-wide review of restoration to verify that sufficient restoration progress is being made per the requirements in each Habitat Specific standard.

Decision Rule for Certification

Certification is awarded when the evaluation team and Salmon-Safe are satisfied that the park system:

- ⊙ Meets all non-provisional standards and requirements (i.e., those general standards and performance requirements that must be met prior to certification as designated with the symbol **Ⓜ**).
- ⊙ Meets all provisional standards and requirements, or has provided written agreement to comply with specific conditions stipulated by the evaluation team to address any observed non-conformances with the provisional standards or performance requirements.

The above requirements must be met at both the system-wide review and site verification levels. All sites in the sub-sample of parks selected for the field review must

¹ Individual parks that comprise more than 25 percent of the total park system are not included for purposes of estimating total park system acreage. Large parks included in the random selection of parks to be field verified may be sub-sampled at the discretion of the evaluation team.



meet the above requirements. Additionally, the system-wide review based on established policies, reporting documents, and interviews must indicate that the park system as a whole meets the requirements.

In the event that the park system does not meet the mandatory, or non-provisional standards or performance requirements, certification will not be awarded. Rather, the evaluation team will stipulate one or more preconditions. These preconditions must be completed to the satisfaction of the evaluation team prior to the award of certification.

Maintaining Certification

Salmon-Safe park system certification is valid for five years, subject to annual evaluation that includes an overview of system-wide performance focusing on any significant alterations in management objectives and practices that could affect the continued validity of Salmon-Safe certification. Satisfactory progress in meeting any outstanding conditions required by the evaluation team is confirmed during annual evaluation.



BIOLOGICAL BASIS FOR STANDARDS

In a general sense, compliance with Salmon Safe certification standards is intended to promote landscape level conservation and protection of biological diversity. Salmon are a key species and an indicator species within the Pacific Northwest and their conservation is tightly intertwined with the health of the larger ecosystem. However, the primary focus of the Salmon-Safe program is on salmonid species and their habitat requirements. Thus, the evaluation focuses on the following key areas of habitat vulnerability most critical to salmonid survival:

1. *Water Quality* – Introduction of sediment, energy (temperature), or chemicals and nutrients from surface or sub-surface runoff.
2. *Water Quantity* – Increase in the magnitude and frequency of peak flows from natural soils and vegetation types converted to impervious surfaces; or reduction in instream flows due to surface or sub-surface water withdrawal for irrigation.
3. *Instream habitat* – Direct alteration of in-stream habitat, including stream bed and stream banks through bank armoring, channelization, or removal of in-stream wood.
4. *Riparian habitat* – Elimination or reduction of riparian vegetation that can provide numerous stream habitat functions including shade, bank stabilization, source of instream cover (large and small wood) and food chain support.
5. *Fish passage* – Poorly designed or inadequately maintained stream crossings that are barriers to passage by adult or juvenile fish.

Part A of the Standards lists the general requirements that broadly address these areas of habitat impact and that must be met for Salmon Safe Certification. Part B of the Standards (Habitat Specific Standards) is comprised of more specific standards organized into six habitat management categories:

- ⊙ In-stream habitat protection and restoration
- ⊙ Riparian and wetland protection and restoration
- ⊙ Water use management (irrigation activities)
- ⊙ Stormwater management
- ⊙ Erosion and sediment control
- ⊙ Chemical and nutrient containment

Each category addresses a different aspect of habitat management that directly relates to protection of salmonids. Each category is comprised of one to several certification standards. Each standard describes the management objective or desired outcome for habitat conditions. Under each standard are more specific performance requirements that must be met for certification. Collectively, the standards in Part B cover the range of management most directly related to protection of salmonid habitat.



PART A: GENERAL STANDARDS FOR CERTIFICATION



Part A of the Certification Standards, below, lists the general standards that must be met by the park system for certification.

- R** 1. Park management is not in violation of national, state, or local environmental laws or associated administrative rules or requirements, as determined by a regulatory agency in an enforcement action.
2. System-wide provisions are made for the identification and protection of rare, threatened, and endangered salmonids and their habitat in parks.
3. Standard management practices used in day-to-day park landscape maintenance, such as turf management, do not jeopardize salmon or their habitat, as determined by conformance with Part B of the Certification Standards. These practices are implemented system-wide and applied to individual parks with a high level of compliance.
- R** 4. All pesticide use occurs within the context of an integrated pest management (IPM) program as documented in a comprehensive written plan (Appendix A – see elements required of an IPM plan acceptable to Salmon Safe).
5. Satisfactory progress is being made in addressing landscape design and infrastructure features that degrade salmon habitat, such as pavement areas, road crossings, or concrete lined streams. These restoration efforts may include those required by the evaluation team to address deficiencies, as well as efforts already being undertaken on parklands. This progress may include prioritized project lists for the park system, master plans for specific projects, and other planning documents as determined by the review team.² There is demonstrated progress in correcting management deficiencies.
6. System-wide summary reporting is adequate to document compliance with Salmon-Safe standards. See Appendix A for a list of written summary reports, documents, and data required for the system-wide and park-specific assessments.
- R** 7. Park system management allows monitoring by a third party authorized by Salmon-Safe, and fully cooperates with such monitoring in so far as possible given park system staffing and funding constraints. Under rare circumstances, the evaluation team may request that park management conduct limited monitoring where such monitoring is critically needed to assess the efficacy of existing management practices in meeting Salmon Safe standards. The evaluation team will carefully weigh the need for the monitoring against park management's guidance regarding the scientific and economic feasibility of the proposed monitoring.



² An evaluation of buildings located on park property is not included in Salmon-Safe certification.

- R** 8. A policy addressing new park design is in place. This policy requires that new park design be consistent with Salmon-Safe standards, including restoration goals, as feasible considering public use mandates and cost considerations. For example, park plans demonstrate that they implement low impact development (LID) designs, such as bio-filtration swales. To evaluate conformance, the evaluation team will review park design policy and a sample of new park designs.



PART B: HABITAT SPECIFIC REQUIREMENTS



Part B of the Certification Standards lists standards and performance requirements organized into 6 management categories, each covering a set of considerations important in conserving salmonid habitat.

I. Instream Habitat Protection/Restoration

This category applies to certain stream types (as specified for each standard below) that occur within park system boundaries. The focus of this category is on the condition of the actual channel, including the streambed and banks. Channel modifications, such as bank armoring, wood removal, stream crossings, or channelization, can have direct adverse effects on salmonid rearing and spawning habitat for juveniles and adults of all species. This category includes two standards:

Standard B.1.1: Stream channels are in good condition for providing salmonid habitat, with naturally protected stream banks, meandering channel, and large and small wood structure.

This standard applies to a) known and potential fish-bearing streams and b) non-fish bearing perennial or intermittent streams greater than two feet in bankfull width that are connected to fish bearing streams.

Performance requirements:

1.1.1 Inventory – Park management has an accurate map of fish species distribution (existing and potential distribution of native salmonid species) and stream channel types on park system property. At a minimum, these stream channel types shall include - fish-bearing, potential fish-bearing, and non-fish bearing, but greater than two feet in bankfull width and connected to a fish-bearing or potential fish-bearing stream. Channel inventory includes a summary of existing habitat impacts by general type (such as concrete lined channels) at each park.

R 1.1.2 Channel protection – existing channels are protected from new impacts such as filling and excavation, straightening, unnecessary additional stream crossings, unnecessary removal of wood, or disconnection of off-channel wetlands and ponds.

1.1.3 Restoration effort – A plan is being implemented that shows significant progress toward ensuring that existing stream channel deficiencies are addressed, as feasible within financial constraints and the public use mandate for specific sites, to meet the following objectives -

i) Type of bank protection – Stream banks are well stabilized by native vegetation.



- ii) Channelization – The stream has an intact natural channel and floodplain.
- iii) Artificial ponds – Artificial ponds located in stream channels are removed. Ponds that remain are reconstructed if needed to provide adequate fish passage, habitat, and maintain stream temperatures and oxygen levels within applicable state water quality standards.
- iv) Large wood management – large wood and/or beaver dams provides channel structure and habitat, where feasible.

Standard B.1.2. Road and trail crossings of streams that are on park system property and under park jurisdiction are minimized and have a minimal effect on instream habitat, fish passage, and constriction of flood conveyance. This standard applies to known and potential fish-bearing streams.

Performance requirements:

- 1.2.1 An inventory of stream crossings has been conducted to determine priorities for fish passage and flood conveyance.
- 1.2.2 Restoration effort – A plan is being implemented that, in the judgement of the evaluation team, shows significant progress, as feasible within budgetary constraints, toward:
 - i) ensuring that the frequency and placement of crossings contributes to the restoration of riparian habitat and reduction of water quality impacts.
 - ii) replacement of culvert crossing with bridges or natural bottom culverts where feasible and where there are clear benefits for fish.



II. Riparian & Wetland Protection/Restoration

The focus of this category is on measures taken and management practices employed to protect areas in closest proximity to instream habitat—the riparian vegetation zones and associated wetlands.

This category applies where streams, wetlands, or their riparian zones occur within park system boundaries. This category applies to a) known and potential fish-bearing streams and b) non-fish bearing perennial or intermittent streams greater than two feet in bankfull width that are connected to fish bearing streams. Assessment criteria vary according to stream type (see below)

Standard B.2.1: Riparian areas are in good condition, functioning to maintain and restore stream health, and provide shade, wood recruitment, leaf litter supply, stream bank stability and cover, and filtration of sediment.

Performance requirements:

- 2.1.1. Inventory – All riparian areas of these streams are identified, mapped, and classified by width of existing buffer and general vegetation types (in order to identify riparian areas in need of restoration).
- R** 2.1.2 Riparian zone width – For natural area park lands, impacts on riparian functions affecting water quality, water quantity, food web, microclimate, flood-plains, and habitat shall be minimized within 200 feet of a stream, or within the riparian protection areas cited in adopted local or state plans, whichever distance is larger. Trails are generally an accepted use within these riparian areas unless they are obvious sources of sediment, chemical pollution, or bank instability.
- 2.1.3 Vegetation – Riparian zones are dominated by vegetation that provides riparian functions of bank stability and shade, at a minimum.
- 2.1.4 Restoration effort – A comprehensive program is underway to identify riparian restoration priorities. Implementation is underway to improve riparian functions and conditions, as feasible within budgetary constraints and public use mandates, in terms of:
 - (i) in developed park lands, improving function of riparian buffers in an area from 50 to 200 feet from the stream channel, depending on site characteristics, with respect to:
 - providing off-channel habitat,
 - improving water quality,
 - providing additional flood storage
 - reducing the impact of invasive species, restoring native vegetation.
 - (ii) in natural area park lands, enhancing native plant communities.



Standard B.2.2: Wetlands connected to known or potential fish-bearing streams are in good condition, providing valuable slow water rearing habitats for juvenile salmonids and helping to filter and moderate flow to downstream areas.

Performance requirements:

- 2.2.1 Inventory –Wetlands are identified, classified, and mapped. Classification of existing wetlands includes types of impacts and whether the wetland historically or currently provides fish habitat.
- 2.2.2 Wetland protection – Existing wetlands are protected under park management. Management or public impacts that are detrimental to wetland native vegetation, soils, or water quality are minimized. ®
- 2.2.3 Restoration effort – Plans are being implemented at the system-wide and site level (if appropriate) that show significant progress, where feasible within budgetary constraints and public use mandate, toward restoring naturally occurring wetlands or creating wetlands that improve stream habitat directly or indirectly by:
 - providing off-channel salmonid habitat,
 - improving water quality,
 - providing additional flood storage,
 - reducing the impacts of invasive species, and restoring native vegetation.



III. Water Use & Irrigation Management

The focus of this category is on the system-wide and individual site use of water for irrigating park vegetation. Water withdrawals have the potential to adversely impact salmonid habitat, primarily by reducing instream flows. Impacts can be minimized by selecting alternative water sources that do not reduce instream flows, and by reducing the use of water. Water conservation methods include the use of less water-dependent landscaping, maximizing the efficiency of the application system, and reducing the area irrigated. This category includes two standards:

Standard B.3.1: The **selected source of irrigation water** results in the least potential impact to instream flows of fish-bearing streams.

Performance requirements:

3.1.1 Withdrawals of surface water sources are managed to avoid impact to salmonids in the source stream during cases of drought.

Standard B.3.2: Water conservation measures reduce irrigation water use to the minimum necessary to support maintenance of park system grounds.

Performance requirements:

Conservation plan – the park system follows a plan to conserve water by focusing watering in limited areas of each park based on public use requirements.

R 3.2.2 Water use monitoring is conducted and annual summary reporting is available to the public. Reporting documents a decline in water use per acre for the system over a five-year period or explains how no further efficiencies are feasible.

3.2.3 Restoration effort – A plan is being implemented that shows significant progress, where feasible within budgetary constraints and public use mandate, toward increased water conservation, including:

- i) Low water use landscaping – landscapes are developed that utilize vegetation that requires less dependence on irrigation.
- ii) Expansion of an efficient, modern irrigation system to set irrigation supply based on vegetation requirements, infiltration, evapo-transpiration, and other factors.
- iii) Water use plan to further limit irrigation areas to high priority sites as determined by the park system



IV. SURFACE WATER RUNOFF MANAGEMENT

This category focuses on the management of stormwater runoff within the park system. High levels of impervious surface and drainage systems such as roads and gutters reduce soil infiltration, and can increase the magnitude and frequency of peak flows in the receiving stream. Increased flooding can degrade stream habitat by eroding the channel bed and banks, scouring spawning gravels, and removing stream structures. Frequent flooding can also directly impact juvenile rearing salmonids that require stable, slower waters as over-wintering habitat. Stormwater from parking lots, roads, and landscapes can also be contaminated with oils, heavy metals and pesticides that degrade the water quality of the receiving streams. This management category addresses practices to treat stormwater runoff to reduce both water quantity and water quality impacts. This category has a single standard:

Standard B.4.1: Various methods to treat stormwater runoff are maximized within the park system as feasible, including infiltration, bio-filtration, and detention.

Performance requirements:

- a) Inventory – A summary report provides an estimate of the percent of impervious surface (pavement) in each park based on visual inspection of aerial photographs and field knowledge of the parks. The report includes a summary of the total percent impervious estimate for both natural area parks and developed parks. In addition, the report lists any special stormwater mitigation projects that have been completed at each park, such as reduction in pavement, detention ponds, or bio-filtration swales.
- b) Drainage routes – primary stormwater drainage routes within parks and location of receiving stormwater drains and streams are considered in park management activities, such as pesticide application, mowing, and implementation of stormwater treatment projects.
- c) Restoration effort – A plan is being implemented that shows significant progress toward increasing pervious cover types within the park system and/or increasing the value of park sites in diffusing, infiltrating, or detaining stormwater flow generated within parks, as feasible within financial constraints and management mandate for public use of specific sites, including:
 - (i) reducing impervious surface (pavement) to less than 5 percent of the park system land as a whole, and less than 2 percent of park system land managed as natural areas.
 - (ii) Primary stormwater drainage routes in parklands are mapped, including locations of receiving stormwater drains and streams.
 - (iii) Treatment for water quantity and quality – use of various methods to diffuse, store, and filter stormwater runoff, such as bio-filtration swales, bio-filtration sumps, constructed stormwater treatment wetlands, and rain gardens.



V. Erosion & Sediment Control

Sediment delivery into fish-bearing streams is a major cause of habitat degradation, particularly for salmonid spawning. Stream bank erosion and upland surface soil erosion are the principle sources of sediment. Only upland sources of erosion are evaluated under this category, as bank erosion is evaluated in the instream channel category. Management practices should adequately protect soils from movement. This category has a single standard.

Standard B.5.1: Soils protection is accomplished by vegetative cover, mulch, or other methods to prevent off-site movement of sediment. Erosion control for new construction, stored soils, and potential surface erosion areas are addressed by erosion control standards adopted and used system-wide.

Performance requirements:

5.1.1 Trail systems – Earthen trails are protected by mulch, water bars, closures or other BMPs as necessary to prevent erosion.

R 5.1.2 Vegetative cover – No area larger than 100 square feet within individual park sites is comprised of bare or disturbed soils that show evidence of sediment transport to streams or off-site in stormwater.

5.1.3 Restoration effort – Plans for stormwater drainage systems demonstrate progress toward protecting soils from erosion and preventing the transport of sediment into streams or off-site stormwater. Park system management actively seeks out and decommissions unauthorized trails.



VI. Chemical and Nutrient Containment

Salmon survival depends on clean water, free from harmful levels of fertilizers, pesticides (herbicides and insecticides, fungicides, and other bio-cides), stormwater runoff pollutants, and organic waste. These contaminants can travel long distances in stormwater runoff, from park sites to receiving streams. The principal methods to avoid contamination of salmon bearing waters are to minimize overall inputs of these contaminants, restrict the type of inputs, and develop an acceptable method of application through a comprehensive management program, such as an Integrated Pest Management (IPM). This management category has three standards:

Standard B.6.1 Pesticides use in the park system does not result in contamination of stormwater or streams with amounts of pesticides harmful to salmon or aquatic ecosystems.

Performance requirements:

6.1.1 Type of pesticides – All use of pesticides in park lands including waterways, waterway buffers, and uplands, is limited in an IPM program by the specific policies on the method of use, including timing and location. Park management uses only those pesticides that are listed on a park system approved list. These pesticides will only be used when there is no undue risk of harm to salmon and aquatic ecosystems. This limited use list is established and reviewed on an annual basis by park management to ensure that potential harm to salmon and aquatic ecosystems is minimized.

R 6.1.2 Minimizing aquatic impacts from high risk pesticides - The use of any pesticides on the Salmon Safe Cautionary List of High Risk Pesticides requires written explanation for each pesticide used that details the methods of use, including timing and location, that demonstrate that the risk to aquatic systems is minimized (Appendix B – Salmon Safe’s Cautionary List of High Risk Pesticides).

R 6.1.3 Restricted use zones – Pesticide use is specially managed within 1) waterways, and 2) waterway buffers. The buffer zone is defined as a corridor of land that is 25 feet in width on the sides of a stream or other body of water. Measurement of this buffer zone begins at the edge of the water line at the time of application. Anticipated seasonal or weather related changes affecting water level will be included in the decision making process when dealing with buffer zones.

R 6.1.4 Pesticide treatment of trees – Pesticides are used only on rare occasion for treating tree pests or diseases for trees within riparian buffer zones. Injection of pesticides within tree tissues is the only application method for trees allowed in riparian buffer zones.



- R** 6.1.5 Application equipment – Within riparian buffers, pesticide application for vegetation other than trees is done by hand and using low volume, low pressure, single wand sprayers, wiping, daubing and painting equipment, or injection systems. The methods used minimize fine mists and ensure that the applied materials reach targeted plants or targeted soils surfaces.
- R** 6.1.6 Pesticide drift – Great care is taken to ensure that pesticide drift does not reach nearby surface waters by using appropriate equipment and methods. Spray applications are not allowed in the buffer area when wind speed is above 5 mph or wind direction would carry pesticides toward open water.
- R** 6.1.7 Reduction program – An IPM plan or policies are being implemented that promote management practices that reduce the impact of, the unnecessary reliance upon, or eliminate the need for pesticides. At the discretion of the park management agency, these practices may include careful monitoring and scouting of insects, weeds, and disease, use of non-spray control methods (cultural practices and mechanical controls), use of reduced impact pesticide controls, and/or managing specific sites without the use of pesticides (Appendix A – see required elements of an IPM plan).
- R** 6.1.8 Pesticide applicator licensing – All persons applying pesticides to parks must be currently licensed as Public Pesticide Applicators by the State Department of Agriculture. Licensed personnel must be specifically endorsed for any of the state defined categories of pest control they undertake, such as aquatic endorsement for all aquatic pest control activities.
- R** 6.1.9 Pesticide storage, rinsates, disposal – the park system has rigorous policies in place to ensure that no contamination of stormwater or streams occurs due to storage, cleaning of equipment, or disposal of pesticides and these policies are adhered to by park system personnel.
- R** 6.1.10 Pesticide tracking system – Detailed records are maintained for all pesticide applications, including applications to aquatic areas and buffer zones, consistent with state requirements.
- R** 6.1.11 Pesticide application timing – pesticides are not applied when it is raining, unless otherwise directed by label instructions, or when there is potential for transport by runoff to stormwater drains or streams. Decisions regarding scheduling of pesticide applications should account for the expected impacts of anticipated storm events.



Standard B.6.2: Fertilizer and lime use and potential for contamination of storm-water and streams is minimized through adherence to a program that uses alternative cultural and mechanical practices to maintain soil fertility, uses fertilizers with discretion based on soil fertility and plant needs, uses slow reacting fertilizers, and ensures proper application of fertilizer and lime in terms of amounts and timing.

Performance requirements:

- R** 6.2.1 Types of fertilizers – Fertilizer types are tailored to the existing soil conditions and plant requirements. Slow release or organic fertilizers are generally used. Fertilizers must be selected through a state-approved screening and approval process to ensure the fertilizer does not contain toxic contaminants. If soluble fertilizers are used the timing and rate of application is carefully considered (see below).
- R** 6.2.2 Fertilizer application amounts – In general park turf and shrub bed areas soluble fertilizer rates of application are limited to no more than .5 lb N/1000 square feet with restraints on timing to minimize fertilizer in stormwater runoff.
- 6.2.3 Low fertilizer landscaping – plants with low fertilizer requirements are used for landscaping where feasible.
- 6.2.4 Focused use – Fertilizer and lime are used only on high and moderate intensity use areas, such as flowerbeds, ball fields, golf courses, some turf areas and planting beds, and plantings associated with construction and restoration projects.
- R** 6.2.5 Buffer zone width – Fertilizer and lime use is highly restricted within a waterway buffer zone (see 6.1.2).
- R** 6.2.6 Use within watercourse buffers – fertilizer use in buffer zones of waterways is restricted depending on the intensity of management and public use. The allowable use of fertilizer also varies depending on whether they are being used for routine maintenance or for restoration and construction projects.
- R** 6.2.7 Soil testing– Periodic soil testing is done to determine the need for fertilizer (Phosphorus and Potassium) and lime.
- 6.2.8 Soil fertility - practices, such as on-site mulching of leaf and grass clippings, are used to reduce need for fertilizer.
- R** 6.2.9 A summary report of annual fertilizer use is provided that shows a stable or declining trend in synthetic fertilizer use system-wide, taking into account changes in acreage managed, park uses, and other factors.

Standard B.6.3: Other contaminants³, such as animal and chemical waste, do not contaminate stormwater or streams leaving the parks, recognizing that the park system may have a limited management ability to control the public and actions of other agencies.

Performance requirements:

- 6.3.1 Animal waste control – Park management and education policies regarding dog or other domestic animal waste control are effective in minimizing the contamination of stormwater or streams.
- R** 6.3.2 Chemical waste spills/dumping – Parks are managed to avoid chemical waste dumping. The park system has a rigorous chemical material spill response policy and personnel are trained in spill response.
- 6.3.3 Wildlife waste control program (geese, ducks) – If necessary and practical, a park system management program is implemented to ensure that duck and goose waste does not contaminate stormwater or streams. This may include modified landscaping to discourage waterfowl browsing or periodic barbecues for the evaluation team.



³ Stormwater contamination and treatment related to runoff from roads and landscapes under park management are evaluated in the Stormwater management category.

GLOSSARY

Bankfull width – the average width of the stream when the flow is at the ordinary high water mark, generally considered the two year flow event and measured in the field as the stream channel below the line of perennial vegetation.

Best management practices – includes mowing, fertilizing, pesticide spraying, and other day-to-day landscape maintenance activities that are conducted in such a way as to minimize environmental impacts.

Developed parkland – parkland that comprises part or all of a defined park and is managed for moderate or intensive public uses, such as sport fields, turf, or gardens.

Fish-bearing stream – a stream that is known to provide habitat for fish during at least some portion of the year. Fish-bearing includes all species of fish to ensure that potential salmonid streams are not excluded because of current degraded conditions.

Infrastructure – constructed portions of a park, such as roads, drainage structures, road crossings of streams, and parking lots. For certification purposes, infrastructure does not include buildings.

Landscape design – the established landscaping features of a developed park, such as areas of mowed turf grass, buffers along watercourses, areas of trees and shrubs. These areas are intermediate in park management influence, between day to day best management practices and infrastructure.

Natural area park land – park land that comprises part or all of a defined park and is managed to protect and restore native vegetation and species or is in a de facto natural area status because it has not been designated for other uses.

Pesticide – a general term for any substance used to control pests. Park pests consist primarily of weeds, insects, disease organisms, rodents, and burrowing mammals. Pesticides include insecticides, herbicides, fungicides, and other natural or synthetic substances used to kill pests.

Potential fish-bearing stream – a stream that either historically provided habitat, or could potentially provide habitat for fish, including salmonids, with adequate restoration.

Riparian zone – an ecological zone of varying width adjacent to a waterway or wetland that, in a natural condition, provides critical wildlife habitat and is essential for maintaining the healthy functioning of the adjacent stream, pond, or wetland. Unless otherwise stated, the width of the riparian zone is 200 feet for assessment purposes.

Waterway buffer - a corridor of land of a specified width adjacent to the stream or wetland edge in which there are special management restrictions to protect and restore aquatic habitats.



APPENDIX A: DOCUMENTS REQUIRED FOR CERTIFICATION

1. Inventory and mapping of fish species distribution (existing and potential distribution of native salmonid species) and stream channel types for property managed by the park system. At a minimum, these stream channel types shall include - fish-bearing, potential fish-bearing, and non-fish bearing, but greater than two feet in bankfull width and connected to a fish bearing stream. The channel inventory shall include a summary of existing habitat impacts by general type, such as locations of channelized streams, severe eroding banks, and other parameters, for each park.
2. Inventory and mapping of stream crossings within the park system to determine need for fish passage and flood conveyance.
3. Inventory, mapping, and description of riparian zones (of all stream types listed in 1, above) to summarize existing protected buffer widths, shade condition, general vegetation types (such as mowed grass or mature native trees) within the protected buffer and outside that area in the riparian zone), and riparian restoration opportunities. Local jurisdiction inventory & mapping of riparian areas overlaid with park areas is generally sufficient to meet this requirement.
4. Inventory, mapping, and classification of wetlands. Inventory and mapping using National Wetland Inventory or local wetland inventory data is the minimum acceptable level of mapping. Classification includes types of impacts and whether the wetland historically or currently provides fish habitat.
5. Summary report that provides an estimate of the percent impervious surface (pavement) in each park based on visual inspection of aerial photographs and field knowledge of the parks. The report includes a summary of the total percent impervious estimate for both natural area parks and developed parks. In addition, the report lists any special stormwater mitigation projects that have been completed in the five years preceding the initiation of certification evaluation at each park, such as reduction in pavement, detention ponds, or biofiltration swales.
6. An Integrated Pest Management Plan (system-wide only) or summary information (individual park sites) that contains the following information –
 - a. Pest control strategy to ensure that prevention and physical, mechanical, or biological control methods are evaluated for use before pesticides are used.
 - b. Criteria for choosing any method of pest control considers any potential negative impacts to aquatic systems.
 - c. Limited Use List of pesticides approved for used in aquatic buffers with annual review based on available information on impacts to aquatic systems.



- d. Training and education in pest management techniques and IPM plan
 - e. Buffer zone width and restrictions for use of pesticides within buffer zones
 - f. List of pesticides used on trees and discussion of methods and frequency
 - g. Application equipment and methods used
 - h. Precautions taken to prevent pesticide drift
 - i. Pesticide applicator licensing requirements
 - j. Pesticide storage, rinsate, and disposal policies
 - k. Pesticide tracking system
7. Summary reports on monitoring activities and findings for monitoring conducted in parks within 5 years prior to the park system's initial application for Salmon-Safe certification. Monitoring reports include system level summary reports on irrigation and water use. Reports are also provided for any water quality and habitat monitoring projects that have been conducted, including stormwater runoff testing to help determine if over-fertilization (Nitrogen) is occurring in high fertilizer use areas.
8. Annual restoration project monitoring reports summarizing the results of monitoring according to the restoration monitoring policy established by park system.
9. Annual summary report from periodic soil testing conducted to determine the need for fertilizer and lime use and to demonstrate trends in fertilizer and lime use park-wide. The report should include factors responsible for the reported increase or decrease in use and relation to soil testing.
10. Harmful chemical waste spills/dumping prevention and response policies and summary documentation on any chemical waste dumping that has occurred.



APPENDIX B: SALMON-SAFE HIGH RISK PESTICIDE LIST

Certain pesticides are a serious threat to salmon and other aquatic life. In addition to killing fish, these pesticides at sub-lethal concentrations can stress juveniles, alter swimming ability, interrupt schooling behaviors, cause salmon to seek sub-optimal water temperatures, inhibit seaward migration and delay spawning. All of these behavioral changes ultimately affect survival rates.

The following chart lists many of the pesticides known to cause problems for salmon and other fish. The list includes chemicals that could be used in park & natural area applications that are listed with the EPA in various risk categories. Use this chart to help identify pesticides that require special consideration. Please note that this chart lists only some of the currently available pesticides in common usage.

A using any of the pesticides indicated as “High Risk” below may be certified only if written documentation is provided that demonstrates a clear need for use of the pesticide, that no safer alternatives exist, and that the method of application (such as timing, location, and amount used) represents a negligible risk to water quality and fish habitat.

PESTICIDES USED IN URBAN APPLICATIONS THAT POSE HIGH RISK TO SALMON AND AQUATIC LIFE

1,3-dichloropropene	Disulfoton	Prometryn
2,4-D	Diuron	Propargite
Abmectin	Esfenvalerate	Propiconazole
Acephate	Ethoprop	Rimon
Altacor	Extoxazole Technical	Quintozene
Atrazine	Fenamiphos	Rimon
Bensulide	Fenpyroximate	Simazine
Bentazon	Fenbutatin-Oxide	Spinosyn
Bifenazate	Folpet	Tebuthiuron
Bifenthrin	Imidacloprid	Thiram
Bromoxynil	Iprodione	Triclopyr
Carbaryl	Linuron	Trifluralin
Carbofuran	Malathion	
Carfentrazone-ethyl	Mancozeb	
Chlorothalonil	Maneb	
Chlorpyrifos	Metolachlor	
Copper Sulfate ¹	Metribuzin	
Cyhalothrin	Naled	
Cypermethrin	Norflurazon	
Diazinon	Oryzalin	
Dicamba	Oxyfluorfen	
Dichlobenil	Paraquat Dichloride	
Diclofop-methyl	Pendimethalin	
Diflubenzuron	Permethrin	
Dimethoate	Phosmet	

¹Salmon-Safe restrictions apply to any copper-containing pesticide including copper hydroxide, copper ammonium hydroxide, copper carbonate, and copper oxide, and others.



Pending Review. This list is based on EPA hazard level for fish and fish habitat. It is revised as pesticide registrations are updated and as more environmental data becomes available.