

**CASTLE HIGH SCHOOL
WATER POLLUTION CONTROL FACT SHEET
2017**

Castle High School is located on Kaneohe Bay Drive on Kaneohe Bay Drive east of the Kamehameha Highway-Likelike Highway intersection in Kaneohe. Storm water discharges from the campus flow via the small Municipal Separate Storm Sewer System (MS4) into an unnamed stream that runs through campus and into Kawa Stream, both Class 2 inland waters. The average annual rainfall at the school is approximately 57 inches. The school campus has varied topography with slopes to the unnamed stream, and to Kawa Stream, which borders the campus on the east. Based on the site visit conducted in June 2006, issues of importance for storm water quality on this campus include potential storm water pollution from erosion, improper waste storage and disposal, grounds-keeping practices, illegal dumping, littering, auto maintenance classes, and agricultural class activities.

Kawa Stream is listed on the *DOH Final 2004 List of Impaired Waters in Hawaii* (June 16, 2004) for nutrients, turbidity, and suspended solids based on visual assessment. Total Maximum Daily Loads (TMDLs) for total suspended solids, nitrogen, and phosphorus have been established for Kawa Stream (DOH, June 2005, *Allocations of Total Maximum Daily Loads of Total Suspended Solids, Nitrogen and Phosphorus for Kawa Stream, Kaneohe, Hawaii*). Castle High School is considered a potential source of nutrients to Kawa Stream. Annual storm flow load reductions determined through the TMDL research performed to date include the following: Total Suspended Solids, 609 kilograms (39 percent reduction); Total Nitrogen, 32 kilograms (68 percent reduction); and Total Phosphorus, 7 kilograms (54 percent reduction). Practices to reduce eroded soil, fertilizer, and decomposing plant matter from entering the unnamed stream are emphasized and could potentially contribute to a reduction of soil and nutrients from the school grounds.

**WHAT YOU CAN DO TO HELP PROTECT WATER
STAFF ACTIVITIES**

Use water wisely. By conserving water at Castle High School, the amount of wastewater needing treatment and disposal will be reduced. Involve target audiences, including school staff, students, families, and the community, in the MS4 permit process and in storm water pollution prevention.

Use fertilizer and pesticides sparingly. Rain water can easily carry these substances to a nearby storm drains and stream.

Landscape school land to prevent erosion. Cover bare ground with grass, shrubs or trees to hold soil in place. Establish vegetation buffer zones along storm drains and stream.

Dispose of hazardous substances properly. Motor oil, paints, solvents and other chemicals should not be poured on the ground or down the storm drains, because they can migrate to our streams and ocean. Oil should be recycled. Other substances should be used up, evaporated or soaked into clay litter, wrapped in plastic and put out with trash.

Improve Castle High's Housekeeping. Fix leaks throughout campus by replacing faucet washers and toilet flappers as needed. A slow drip or leak can easily waste more than 100 gallons of water a week. Put litter in trash cans so it does not get washed into the storm drains or stream.

Implement annual campus cleanup event. Coordinate cleanup event for the whole campus to collect litter and address any other issues that would impact storm water quality, such as storage of materials and soil erosion areas. Maintain record of litter collected and other changes that impact storm water quality and take "before and after" pictures of campus.

STUDENT ACTIVITIES

Study storm water management. Teachers need to address hazards associated with illicit discharges to our storm drains and streams. Develop steps that can be taken to reduce storm water pollution.

Learn about good Housekeeping. Good housekeeping practices are simply maintaining a safe, orderly, and clean learning environment. Conduct an individual or class project to reinforce pollution prevention activities consistent with protecting storm water.

Learn where your wastewater goes. Investigate the wastewater drainage process from School to ocean via streams, storm and sewer drains.

Educate others. Conduct an individual or class projects to inform others about protecting our ocean from pollution.

Participate in annual campus cleanup event. Participate in a campus cleanup day to collect litter and address any other issues that would impact storm water quality, such as storage of materials and soil erosion areas.

REPORT ANY ILLEGAL DISCHARGE

As a member of Castle High School we make a difference by reporting any illegal discharge in our school and community.

Castle High School 305-0700

Spill response (Hazard Evaluation and Emergency Response)

- Local (HFD): 911 (24/7)

- State (HSERC): 586-4249 (business hours) 247-2191 (after hours)

Please refer to our school website: www.castlehs.k12.hi.us and click on link: MS4 for more information and resources.

To report illegal discharge that has already occurred, call 692-5656

Polluted runoff public outreach: 692-5208 (City) 586-4309 (State)

Share your pollution behaviors and practices with your family, friends, and neighbors.

**CASTLE HIGH SCHOOL
AUTO SHOP
WATER POLLUTION CONTROL FACT SHEET**

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MS4 Best Management Practices (BMP) for Custodial Personnel

Public Education and Outreach

- Attend annual MS4 education/training. Ensure new and substitute custodial personnel are aware of MS4 pollution prevention BMPs.
- Participate in campus clean up events to assist in public education in pollution prevention

Illicit Discharge Detection and Elimination

- Visually check storm drains/inlets daily in their assigned areas to identify potential pollutants. Quarter-ending checks must be recorded in Custodial Storm Drain Inspection Log.
- If illicit discharge is detected, Custodians must attempt to determine origin of pollution. Report spills or illegal dumping to Supervisors and appropriate regulatory agencies.
- Pick up trash materials and place in appropriate trash receptacles.
- Record trash debris from storm drain cleanup events/inspections.

Pollution Prevention/Good Housekeeping

- Maintain general grounds keeping practices to prohibit erosion and debris from entering storm drains.
- Dispose used mop water at indoor sinks that connects to sanitary sewer system to ensure proper waste storage disposal.
- No cleaning product use on exterior surfaces that are exposed to storm water.
- Ensure cleaning/pest management chemicals do not enter storm drains/drainage systems.
- Apply fertilizer/poisons during dry periods and not in anticipation of rain.
- Monitor/clean areas prone to illegal dumping such as dumpsters, and hidden areas on campus.
- Ensure dumpster covers are lowered and secured during non-business hours to prohibit illegal dumping.
- Remove debris and litter from landscape, storm drain inlets and other drainage structures on a regular basis.

**CASTLE HIGH SCHOOL
AGRICULTURE FARM
WATER POLLUTION CONTROL FACT SHEET**

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The average annual rainfall at the school is approximately 57 inches. The school campus has varied topography with slopes to the unnamed stream, and to Kawa Stream, which borders the campus on the east. Based on the site visit conducted in June 2006, issues of importance for storm water quality on this campus include potential storm water pollution from erosion, improper waste storage and disposal, grounds-keeping practices, illegal dumping, littering, auto maintenance classes, and AG Farm class activities.

Castle's AG Farm is a working organic farm and is conscious of water egress. The AG field is watered three times per week in the summer months, and only one time during the winter months. The little use of poison on weeded areas are consciously used on non-rainy days. No planting is done along the fence line bordering Kawa Stream so no poison pollutants are present. The AG Farm uses Lo'I water to water the Avocado Trees present.

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