

# Aggregate Operators Best Management Practices Handbook

## **PART I**

### **Chapter 1 -- INTRODUCTION**

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## Introduction

This handbook was prepared to assist aggregate operators in understanding common concerns associated with aggregate operations and to help them in planning and selecting Best Management Practices to effectively manage those concerns. The principle advice of this handbook is to ***plan ahead, plan carefully, operate responsibly and reclaim with an eye to subsequent land uses***. Anticipating challenges is considerably more cost effective than trying to compensate after the fact.

This BMP handbook is designed to be a practical, user-friendly reference and learning tool for all aggregate producers in British Columbia. It includes both thorough discussions of BMP options and quick references in the form of tables and illustrations. It can be used to assist in both mine planning and day-to-day operations. Readers are referred to the glossary (Appendix 1) for explanations of terms, and the acronym chart (Appendix 4) for the long hand versions of organization names or phrases.

The detailed planning, operating and reclaiming of an aggregate operation, especially in the case of larger mines, can be a complex multidisciplinary task that goes far beyond the scope of this handbook. Trained professionals such as agronomists, biologists, geoscientists, engineers, environmental scientists, hydrogeologists, landscape architects, planners and soil scientists may be helpful in designing and managing a project. Aggregate producer associations, trade and other government publications, government agencies and equipment suppliers may also have to be consulted. For more detailed advice on pit and quarry reclamation, it is recommended that operators refer to the Reclamation and Environmental Protection Handbook for Sand, Gravel and Quarry Operations in British Columbia, available from the Ministry of Transportation.

### ***How to Use This Handbook- A Step-by-Step Approach***

This handbook is divided into two parts. Part One discusses in general terms the broader aspects of planning and operating aggregate sites. It includes discussions of environmental protection issues and the interests of various stakeholders.

Part Two focuses on the “how to” of planning and operating to avoid safety, land use and environmental problems. After introducing the basics of preparing a mine plan and related maps, it presents nine modules covering such topics as noise, stockpiling and traffic. Each module is a self-contained guide for a particular topic. Ideally, all of the modules should be useful in planning an operation. Through work tables, the modules suggest ranges of BMP options adaptable to individual sites.

### ***What are Best Management Practices***

BMPs are managerial, operational, and structural measures that can be used to prevent, reduce or mitigate various undesired impacts that an operation may cause. Examples may include:

- a treed berm that is used as a visual screen and to intercept dust and noise,
- scheduling of clearing to avoid nesting seasons, and
- the practice of reducing the height from which aggregate is dropped into trucks to reduce both dust and noise.

Each of the Infosheets in Chapter 7 of this handbook describes one BMP. BMPs can be used individually or in combination, and in a wide variety of applications. To be effective, BMPs must be used appropriately and with competence.

As the BMP Infosheets are simply tools for doing things more effectively, they do not always apply and do not replace legislation or regulations. Unlike the Chapter 5 modules, they are intended to be used selectively. Each situation should be individually assessed and BMPs chosen to suit the uniqueness of the operation.

All of British Columbia's Provincial statutes and associated regulations can be found on the Internet at <http://www.qp.gov.bc.ca/statreg/> Regulations detail how statutes are enforced by the Provincial ministries responsible for each particular statute.

To assist with selecting BMPs, this handbook includes numerous tables that present a range of BMP options. In Chapter 7, all BMPs have in their top right hand corner a "USER" list of potential applications.