that authorizes land surveyors to prepare and certify cross-sections, maps, and plans, a qualified, registered, professional land surveyor, with assistance from experts in related fields such as landscape architecture.

§ 780.16 Fish and wildlife information.

(a) Resource information. Each application shall include fish and wildlife resource information for the permit area and adjacent area.

(1) The scope and level of detail for such information shall be determined by the regulatory authority in consultation with State and Federal agencies with responsibilities for fish and wildlife and shall be sufficient to design the protection and enhancement plan required under paragraph (b) of this section.

(2) Site-specific resource information necessary to address the respective species or habitats shall be required when the permit area or adjacent area is likely to include:

(i) Listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), or those species or habitats protected by similar State statutes;

(ii) Habitats of unusually high value for fish and wildlife such as important streams, wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protection, migration routes, or reproduction and wintering areas; or

(iii) Other species or habitats identified through agency consultation as requiring special protection under State or Federal law.

(b) Protection and enhancement plan. Each application shall include a description of how, to the extent possible using the best technology currently available, the operator will minimize disturbances and adverse impacts on fish and wildlife and related environmental values, including compliance with the Endangered Species Act, during the surface coal mining and reclamation operations and how enhancement of these resources will be achieved where practicable. This description shall—

(1) Be consistent with the requirements of §816.97 of this chapter;

(2) Apply, at a minimum, to species and habitats identified under paragraph (a) of this section; and

(3) Include—

(i) Protective measures that will be used during the active mining phase of operation. Such measures may include the establishment of buffer zones, the selective location and special design of haul roads and powerlines, and the monitoring of surface water quality and quantity; and

(ii) Enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. Such measures may include restoration
§ 780.18 Reclamation plan: General requirements.

(a) Each application shall contain a plan for reclamation of the lands within the proposed permit area, showing how the applicant will comply with section 515 of the Act, subchapter K of this chapter, and the environmental protection performance standards of the regulatory program. The plan shall include, at a minimum, all information required under 30 CFR 780.18 through 780.37.

(b) Each plan shall contain the following information for the proposed permit area—

1. A detailed timetable for the completion of each major step in the reclamation plan;

2. A detailed estimate of the cost of reclamation of the proposed operations required to be covered by a performance bond under subchapter J of this chapter, with supporting calculations for the estimates;

3. A plan for backfilling, soil stabilization, compacting, and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area, in accordance with 30 CFR 816.102 through 816.107;

4. A plan for removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of §816.22 of this chapter. A demonstration of the suitability of topsoil substitutes or supplements under §816.22(b) of this chapter shall be based upon analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils. The regulatory authority may require other chemical and physical analyses, field-site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil substitutes or supplements.

5. A plan for revegetation as required in 30 CFR 816.111 through 816.116, including, but not limited to, descriptions of the—

   (i) Schedule of revegetation;

   (ii) Species and amounts per acre of seeds and seedlings to be used;

   (iii) Methods to be used in planting and seeding;

   (iv) Mulching techniques;

   (v) Irrigation, if appropriate, and pest and disease control measures, if any;

   and

   (vi) Measures proposed to be used to determine the success of revegetation as required in 30 CFR 816.116.

   (vii) A soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation.

   (8) A description of the measures to be used to maximize the use and conservation of the coal resource as required in 30 CFR 816.30;

   (7) A description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials, and materials constituting a fire hazard are disposed of in accordance with 30 CFR 816.89 and 816.102 and a description of the contingency plans which have been developed to preclude sustained combustion of such materials;

   (8) A description, including appropriate cross sections and maps, of the measures to be used to seal or manage mine openings, and to plug, case, or manage exploration holes, other bore holes, wells, and other openings within the proposed permit area, in accordance with 30 CFR 816.13 through 816.15; and

   (9) A description of steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. 7401 et seq.).