

GUIDANCE DOCUMENT

For The

**SITE LOCATION AND DESIGN APPROVAL REGULATIONS FOR
DOMESTIC WASTEWATER TREATMENT WORKS**

REGULATION NUMBER 22

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Water Quality Control Division**

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1.0 INTRODUCTION AND GENERAL GUIDANCE

1.1 Purpose of the Guidance Document

This guidance document was developed following the revisions to the “Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works,” Regulation No. 22, adopted by the Water Quality Control Commission (Commission) on May 10, 2004. Regulation No. 22 became effective on June 30, 2004. This guidance document has been prepared by the Water Quality Control Division (Division). It is not a regulation nor is it intended as such. It is intended to provide information and direction to applicants and their consultants in an effort to help them meet the requirements of Regulation No. 22. This guidance document is to be used in combination with Regulation No. 22. Parties seeking site location approval should obtain a copy and be familiar with Regulation No. 22. There may be additional methods or options for meeting the regulatory requirements other than those discussed herein. However, understanding Regulation 22, following this guidance, submitting a complete application, and utilizing the completeness checklist will facilitate a more effective and timely review of a site location application and design submittal.

1.2 Guidance Document Updates

This guidance document may be modified periodically to update contact lists, flow charts, forms, etc. Changes to the guidance document of a directional or policy nature will be coordinated with stakeholder involvement and brought to the Commission for a public informational hearing.

Applicants are requested to visit

<http://www.cdphe.state.co.us/wq/engineering/reg22/guide/22guide.pdf> and check the date on the cover page of their version to ensure that they have the most up-to-date version of this guidance document.

1.3 Using This Guidance Document

This Guidance Document is organized such that users can identify the type of site application (new site, expansion at a previously approved site, lift station, amendment, etc.) applicable to their circumstance and then readily access the specific guidance information needed. The Division suggests that users read section 1.0 in its entirety to determine the type of site application applicable to their circumstance and to gain a general understanding of the site application process. Then the user can go to the section of this document that provides guidance for that type of site application. Finally, a section is provided containing general information on Preliminary Effluent Limits (PELs) that is applicable to certain types of site applications.

Certain terms used throughout this guidance document are designed to help applicants provide the necessary information and reduce the possibility of submitting an application that is found to be incomplete and/or inadequate. The use of terms such as shall, will, must, and required are used in this document to indicate that applicants submitting adequate information in these areas have likely met the corresponding regulatory requirement. Terms such as should, prefer, suggest, and recommend are used in this document to provide potential methods for applicants to meet the corresponding regulatory requirement. The terms may, consider, and encourage are advisory criteria that have been found to be useful for the Division and applicants.

1.4 Statutory Requirements

The Colorado Water Quality Control Act establishes the statutory framework for Regulation No. 22 by requiring site location and design approval by the Division. The statute, C.R.S. 25-8-702, states “no person shall commence construction of any domestic wastewater treatment works or the enlargement of the capacity of an existing domestic wastewater treatment works, unless the site location and the design for the construction or expansion have been approved by the Division.” Regulation No. 22 was initially adopted by the Commission in 1981 to define for applicants the proper procedures to obtain site location approval and establish the information necessary for the Division to determine if a site application should be approved. Thus, Regulation No. 22 provides the specific provisions to implement the statutory requirements regarding site location and design approvals. The technical criteria used to review domestic treatment works designs are provided in a separate Commission policy entitled “Design Criteria Considered in the Review of Wastewater Treatment Facilities Policy 96-1.”

1.5 Division Contacts and Organization

Key contacts within the Water Quality Control Division work within the Engineering Section and Permits Units. An organization chart for the Water Quality Control Division is provided as Figure 1 and staff contacts for the various work units involved in the site application process are provided in Figure 2. The Division’s Site Application Coordinator oversees the planning and administrative aspects of the process while the District Engineers focus primarily on technical aspects. Each District Engineer is assigned to a group of counties. The County in which the project is to be located will determine which District Engineer to contact. This information is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

1.6 Additional On-Line Resources

The following additional resources are available on-line:

The Water Quality Control Act:

<http://www.cdphe.state.co.us/op/wqcc/GeneralInfo/StatutesRegsPolicies/wqccact2007.pdf>

Regulation No. 22:

<http://www.cdphe.state.co.us/regulations/wqccregs/100222wqccdomesticwwtworks.pdf>.

Design Criteria:

http://www.cdphe.state.co.us/op/wqcc/GeneralInfo/StatutesRegsPolicies/Policies/96-1_07.pdf

Commission web page: <http://www.cdphe.state.co.us/op/wqcc/index.html>

Division web page with links to the Engineering Section and Permit Unit web pages:

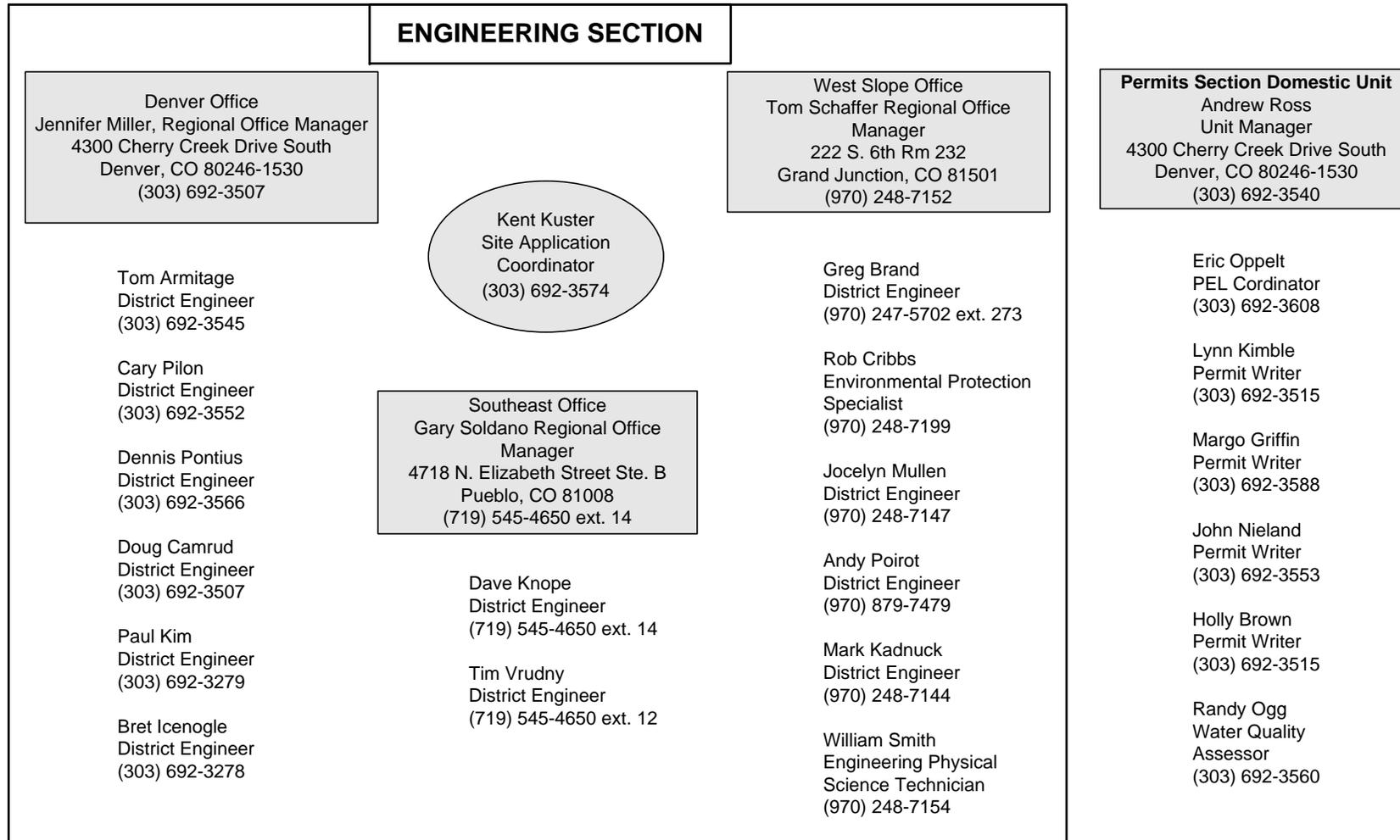
<http://www.cdphe.state.co.us/wq/index.html>

District Engineer Listing by County:

<http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

Documents can be mailed to you upon request, but may require payment of a fee.

Figure 2
WQCD Staff Contacts for
Site Application Process



1.7 When site location and design approvals are needed

Site location and design approvals for domestic wastewater treatment works are necessary whenever an applicant is contemplating construction or expansion of domestic wastewater treatment works with a design capacity of 2,000 of gallons per day or more, including treatment plants, septic tank/soil absorption field systems, lift stations, or interceptor sewers (24-inch diameter or greater).

1.8 Different Types of Site Applications

The Division has developed separate application forms for a variety of situations that require site location approval. Please contact the Site Application Coordinator or the District Engineer for the county where the project will be located if assistance is needed to determine the appropriate type of site application.

1.8.1 New Domestic Wastewater Treatment Works

An application for New Domestic Wastewater Treatment Works is used for the following situations:

- Constructing a new domestic wastewater treatment facility;
- Relocating an outfall sewer that receives treated wastewater from a treatment plant for discharge to a new site that has not received site location approval;
- Replacing an existing wastewater treatment plant on a new site that has not previously received site location approval;
- Constructing new facilities that will produce reclaimed domestic wastewater if those facilities are located on a site that has not previously received site location approval by the Division or at a different site from the secondary treatment plant location; and,
- Construction of or additions to a septic tank/soil absorption field system designed to treat average daily flows of 2,000 gallons per day or more as determined by Site Application Policy Number 6.

1.8.2 Expansion of Existing Domestic Wastewater Treatment Works

An application for Expansion of an Existing Domestic Wastewater Treatment Works is used for the following situations:

- Construction that increases the design capacity of an existing facility at a previously approved site resulting in increased capacity (hydraulic, organic, or other capacity limiting pollutant measure).

The use of this site location approval process for an expansion is applicable to construction of an expanded treatment works on an existing (previously approved) site, even if all of the existing treatment works are abandoned and replaced.

1.8.3 Certification of Eligible Interceptor Sewers

In certain circumstances an interceptor sewer may be eligible for certification in lieu of obtaining site location approval. Interceptor sewers are eligible for certification if:

- The treatment entity has certified it has adequate capacity, or has site location approval for sufficient additional capacity to treat the projected total flow and that flow would be under their permit flow limitation;

- The interceptor sewer will be capable of carrying the projected flows from the applicable service area as certified by the water quality management planning agency; and,
- The project must be consistent with the Water Quality Management Plan.

1.8.4 Interceptor Sewers not Eligible for Certification and Lift Stations

An application for Interceptor Sewers not Eligible for Certification and Lift Stations is used in the following situations:

- Constructing a new lift station or expanding the hydraulic pumping capacity of an existing lift station; and,
- Constructing an interceptor sewer not eligible for certification.

Some sewers that are 24 inches or more in diameter may not be interceptor sewers per the definition in Regulation No. 22. These sewers do not require site location approval. Please refer to section 22.6 of Regulation No. 22 for more information.

1.8.5 Amendment of an Existing Site Location Approval

An application for Amendment of an Existing Site Location Approval is required under the following circumstances:

- The addition of certain new treatment processes that do not increase capacity;
- Physical changes, i.e. treatment process modifications, to the following:
 - a change in type of disinfection to include chlorine gas or from other types of disinfection to chlorination;
 - a change from gas chlorination to liquid chlorination or from any form of chlorination to ultraviolet light (UV) disinfection;
 - significant changes to the secondary treatment system;
 - significant changes to the type of primary treatment process; and,
 - significant changes to the aerobic or anaerobic digestion process including changing from one process to the other or changes that would increase the recycle loadings to the plant above the approved design level or change the characteristics of the biosolids;
- A decrease or an increase in the approved rated hydraulic and/or organic capacity of the treatment works (as long as no construction takes place);
- The addition or expansion of a treatment process to generate reclaimed domestic wastewater;
- A change from surface water discharge to ground water discharge or vice-versa at the same location with no change in the treatment processes; and,
- A partial or complete change from surface water or ground water discharge to treated wastewater reuse. Future site approval amendments are not required for adding reuse sites in accordance with the Reclaimed Domestic Wastewater Regulation (5 CCR 1002-84).

Further information regarding when site application amendments are necessary and a discussion of “significant” in relation to the second bullet above is provided in section 6.0 of this document that covers site application amendments. In general, amending an existing site location approval is a much simpler and abbreviated process as compared to obtaining site location approval for a new or expanded wastewater treatment works.

Separate sections have been included in this guidance document for each of the major types of site applications: new treatment works, expansion, lift stations, or amendments to existing site applications. The Division recommends that users read the rest of this section and then follow the guidance in the specific section of this document that is appropriate for the type of application being submitted.

1.9 When site location approval and design approvals are not necessary

There are circumstances that do not require a site application or amendment (or design approval) such as:

- Replacement in kind, i.e. replacing a component or components of an existing treatment works with similar equipment at the existing, previously approved site location;
- Adding reuse sites in accordance with the Reclaimed Domestic Wastewater Regulation (5 CCR 1002-84);
- Changing the location of the discharge point from one location to another within a previously approved site and within the same defined segment of the receiving stream does not require site approval, and,

A facility contemplating a physical change to an existing domestic treatment works that is not covered by the list provided in section 22.8 (b)(i)-(vi) must submit to the Division an analysis from a professional engineer registered in the State of Colorado describing the proposed changes and how those changes would affect the performance of the other parts of the treatment works and effluent quality. After review by the Division site location approval may not be necessary.

A listing of these decisions may be found at the following web site:

<http://www.cdphe.state.co.us/wq/engineering/LatestNTVReport.pdf>. In order to simplify this process, the following list of physical changes **to existing treatment processes** do not require site location approval or design approval.

TREATMENT PLANTS

Changes to the following **existing processes** at a domestic wastewater treatment works do not require site location approval or design approval. Please refer to section 22.8 (2)(b) of Regulation No. 22.

Primary Treatment

Bar Screens
Grit Basins
Primary Clarifiers

Secondary Treatment

Chemical flocculant addition
Return activated sludge pumps

Solids Handling

Gravity Thickeners
Dissolved Air Flotation
Centrifugation
Aerobic Digestion
Anaerobic Digestion
Sludge Storage
Composting

Sludge Drying/Incineration
Disinfection
Replacement-in-kind of existing disinfection equipment
Changes to the existing disinfection process that do not change the overall plant capacity

However, per Regulation No. 22, changes to the primary treatment system that could reduce primary treatment capacity and/or increase the flow, organic, or solids loadings to the secondary treatment process do require amending the site location approval and design review. Also, submitting a site amendment application and undergoing design review is required prior to adding a new treatment process that could negatively affect effluent quality by increasing recycle flow to the plant or if the change would directly have a negative impact on effluent quality.

LIFT STATIONS

Changes that would not increase the lift station capacity above the approved capacity for that lift station do not require site location or design approval.

INTERCEPTORS

Any maintenance, minor improvements, and rehabilitation of an existing interceptor including adding manholes, connections and diversion structures do not require site location or design approval. Enlargement of short localized sections of sewer (less than 100 feet) to remove flow constraints or improve flow characteristics does not require site location or design approval unless the interceptor capacity at its downstream terminus is significantly increased.

Construction of a parallel interceptor requires site location and design approval, even if the existing line will be abandoned. Construction of a parallel interceptor sewer line requires site location approval even if the existing interceptor is to remain in place.

1.10 Steps to be taken prior to submitting a site application to the Division

The following steps are recommended:

- Preliminary project planning.
- Obtaining preliminary effluent limits from the Division, if necessary.
 - Detailed planning and preparation of the engineering report.
 - Filling out the appropriate site application form.
 - Filling out the completeness checklist.
 - Coordinating reviews conducted by other agencies, if necessary.

1.11 Submitting a completed application to the Division

One original and one copy of the application with signatures, recommendations and comments of the various review agencies, the engineering report, and any supporting materials (Site Application Package) should be submitted to the Division. If DRCOG is the 208 planning agency for your area, it will review the Site Application Package and can forward the submittal to the Division. For areas not covered by DRCOG, the Division would prefer that applicants mail the original Site Application Package to the Site Application Coordinator at WQCD-TSU-

B2 4300 Cherry Creek Drive South, Denver, CO 80246-1530 and one copy of the Site Application Package to the District Engineer for your County. This will help expedite the Division's review of your Site Application Package. The Division's target is to notify you via e-mail that your site location application has been received within 10 days of receipt. Addresses and telephone numbers for the Division's District Engineers is provided in Figure 2.

1.12 The Division's site location application review process 60-day review goal

When the Site Application Package is received, the date is logged into the Technical Services Unit's database and then the review of technical and planning elements proceeds. The Site Application Coordinator and the District Engineer will review the submittal for completeness and conformance with Regulation No. 22. Site Application Packages are generally reviewed in the order in which they are received; however, the quality of the application package, compliance schedules, and existing or imminent public health/water quality issues may influence the review timing of any given application. The Division's goal is to carry out the planning and technical reviews simultaneously to minimize the length of time needed to resolve outstanding issues although this may not always be possible. The 60-day review goal only applies to the Division's review timing and not to the local agency reviews.

A database assists the Division with tracking the Site Application Package review process and it includes a "review timer" that tracks the total time that the Division has the application under review. If the Division determines that the Site Application Package is incomplete or does not adequately address regulatory requirements, the deficiencies will be specifically identified and communicated to the applicant and their consultant either verbally via a telephone call or via written communication (letter or e-mail). The Division's target is to identify issues and communicate with the applicant within 45 days (or sooner) of receiving a Site Application Package. The date that the deficiencies are communicated to applicants is also logged into our database. Applicants should feel free to call us with questions or for clarification of the matter. However, the "review timer" is turned off while staff awaits the necessary information to resolve the deficiencies communicated to the applicant. When the required supplemental information is submitted to the Division that date is logged into the database and the "review timer" is turned back on. The Division's review will then proceed.

The Division has set a goal of processing site applications within a total review time of 60 calendar days. The total review time is the total number of days that the "review timer" is turned on beginning from the date that the Division receives the Site Application Package until the date of the final action letter. The total review time does not include the amount of time that it may take for applicants to address incomplete items or provide information to address deficiencies. Multiple rounds of issue communications negatively impact the Division's ability to meet the 60-day goal. The Division tracks its overall performance and the performance of individual staff members with respect to meeting the 60-day goal. The Division does not always meet the 60-day goal. The Division is twice as likely to meet the 60-day goal when a high quality, complete Site Application Package is initially submitted.

Once all issues are resolved and the technical and planning reviews are complete, the Site Application Package is provided to the Technical Service Unit Manager, Water Quality Protection Section Manager, and Division Director for final review and signature on the final Division action letter.

1.13 Appeal Rights and Process

A list of administrative actions (the Division's final decisions) regarding site applications is published each month in the Water Quality Information Bulletin. This publication date starts the 30-day period in which any party or parties adversely affected or aggrieved by the action, including the applicant, may appeal the Division's decision to the Water Quality Control Commission. The filing of a timely appeal stays the Division's action until such time as the Commission rules on the appeal. Within 90-days of filing an appeal, the Commission, is required by statute to commence a hearing on the issues raised in the appeal. The stay of the Division's action expires if the Commission sustains the Division's action. An action by the Commission overturning the Division action becomes effective immediately. Commission review is a prerequisite to the right of judicial review pursuant to the State Administrative Procedures Act.

1.14 Checking the Status of a Site Application

On the Division's website contains a document that displays the status of all site applications received. The document is updated every week. The document can be found at <http://www.cdphe.state.co.us/wq/engineering/Status/SiteApplicationReviewsforWWTF.pdf> under "Status of Site Application and Design Reviews." The timeliness of the Division's performance in conducting reviews is also posted on this site.

1.15 Design Approval

In addition to gaining Division approval of the site application or amendment, in most cases the applicant will also need to obtain design approval for the treatment works from the Division prior to beginning construction. There are three instances when design approval is to be obtained from the Division. The first is following the site location approval as provided for in the Act. The second is as required by an enforcement order, and the final instance is by request. For lift stations, interceptors, and certain site application amendments, the Division can perform the site application and design reviews concurrently.

There are circumstances where it may not be necessary to receive design approval. The applicant is advised to discuss this possibility with their District Engineer. If a site location approval is not required, design approval is not required, unless it is a requirement of an enforcement order. The Division has established a goal of completing design reviews within a total review time of 60 days. The same process is used to turn on and off the review timer for design reviews as discussed above in section 1.12 for site application reviews.

2.0 NEW DOMESTIC WASTEWATER TREATMENT WORKS

2.1 General Information and Flow Chart

Situations that require a new domestic wastewater treatment works site application include:

- New domestic wastewater treatment facility and/or reuse plant – refer to section 2.2 for specific information and guidance;
- Replacement of an existing wastewater treatment works on a new site that has not received site location approval – refer to section 2.2 for specific information and guidance;
- Construction of new treatment facilities that will produce reclaimed domestic wastewater if those facilities are located on a site that has not previously received site location approval by the Division or at a different site from the secondary treatment plant location - refer to section 2.2 for specific information and guidance;
- Septic tank/soil absorption field systems designed to treat average daily flows of 2,000 gallons per day or more - refer to section 2.2 for specific information and guidance; and,
- Relocation of the outfall sewer to a location that has not previously received site location approval – refer to section 2.3 for specific information and guidance.

The site application process for new domestic wastewater treatment works is generally more comprehensive than the other site application types. The Division is required to examine the Site Application Package for factors that would not be necessary for a site that has previously received site location approval. A flow chart depicting the site application review process for new domestic wastewater treatment works is provided in Figure 3. Section 22.4 in Regulation No. 22 provides the specific requirements to obtain site location approval for new domestic wastewater treatment works.

2.2 Steps to be Taken Prior to Submitting a Site Location Application For A New Domestic Wastewater Treatment Plant

2.2.1 Preliminary Planning

Preliminary Planning is the first step to develop the technical and financial information needed for a site application including service area delineation and population, expected wastewater loading and flows, consolidation study with other facilities in the area, and a financial capacity review. For treatment plants it is also important to narrow the site location and discharge location options to the extent possible. In order to proceed to the next step i.e. the development of preliminary effluent limits (PELs), it is necessary to specify the receiving water body segment (surface or ground water) that the treated effluent will be discharged to, or whether reuse will be practiced. A consultant is often retained during the preliminary planning stage to provide technical information on wastewater treatment issues. A consulting engineer will also be necessary for many of the subsequent steps, e.g. preparing an engineering report describing the proposed wastewater treatment works, analysis of the existing facilities within the service area, etc. The consulting engineer must be a Professional Engineer registered in the State of Colorado, and should be experienced in wastewater management issues.

It is also advisable to contact the Division to discuss the project and receive initial input. The applicant should discuss their plans with either the District Engineer for their area or the Site Application Coordinator. The Division has divided the state into a number of geographic areas,

each assigned to a specific District Engineer. The County in which the project is to be located will determine which District Engineer to contact. This list of District Engineers by County is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

2.2.2 Preliminary Effluent Limits

The Division's development of Preliminary Effluent Limitations (PEL's) can be a critical step to complete a site application, and can take 60 days or more. Many site applications, especially for treatment plants, require PELs see (Regulation No. 22 section 22.4(1)(b)(iii)). Check with the District Engineer or Site Application Coordinator to determine if PELs are necessary for the site application. It is important to submit a site application to the Division with complete PELs, if they are necessary.

A separate submittal to the Division is necessary to request PELs and this must be done in advance of evaluating treatment alternatives, developing the final report, and submitting the site application. The PELs for new or modified wastewater treatment works establish the performance goals for the wastewater facility. Developing the PELs requires assessing the potential impact of the discharge from the facility on the water quality in the receiving stream and/or ground water. For discharge to surface waters, the assessment is based on the upstream ambient water quality data and water quantity at low flow conditions in a given stream segment. Where there are other discharges proximate to the proposed discharge, the PEL process may also need to consider other dischargers to the stream.

If the receiving stream is a habitat for threatened or endangered (T&E) aquatic species, the assessment may include further evaluation of the mixing zone. If the site location application is for treatment works that provide treated effluent for 100% reuse, the assessment includes conformance with appropriate reuse standards, or if no standards exist for the proposed type of reuse, considerations of public health exposure and appropriate standards and/or associated control measures. The PEL application form is available online at .

As can be seen by the above discussion, developing PELs is closely related to the permitting process and the Permits Unit within the Division carries out this task. Section 7.0 has been included in this guidance document to assist you with the PEL process.

2.2.3 The Engineering Report

The Engineering Report provides the information necessary for the Division to evaluate the applicant's proposed treatment alternative and ability to manage and operate the facility over the life of the project. The engineering report includes

- a description of the project,
- brief description of the existing facility (if any),
- service areas contributing flow to the facility,
- population study, flow and loading calculations both present and projected, PELs,
- soil investigations, flood plain location, wetland areas, water rights impacts, and additional considerations may need to be identified in this report.

The report must include an implementation schedule with estimated construction time and an estimated start-up date.

2.2.4 Site Application Forms

Forms are available on the Division's web site at www.cdphe.state.co.us/wq/tech/reg22/siteappforms/sa_form_hom.html or will be mailed upon request. The District Engineer or the Site Application Coordinator can assist you with selecting and filling out the appropriate site application form.

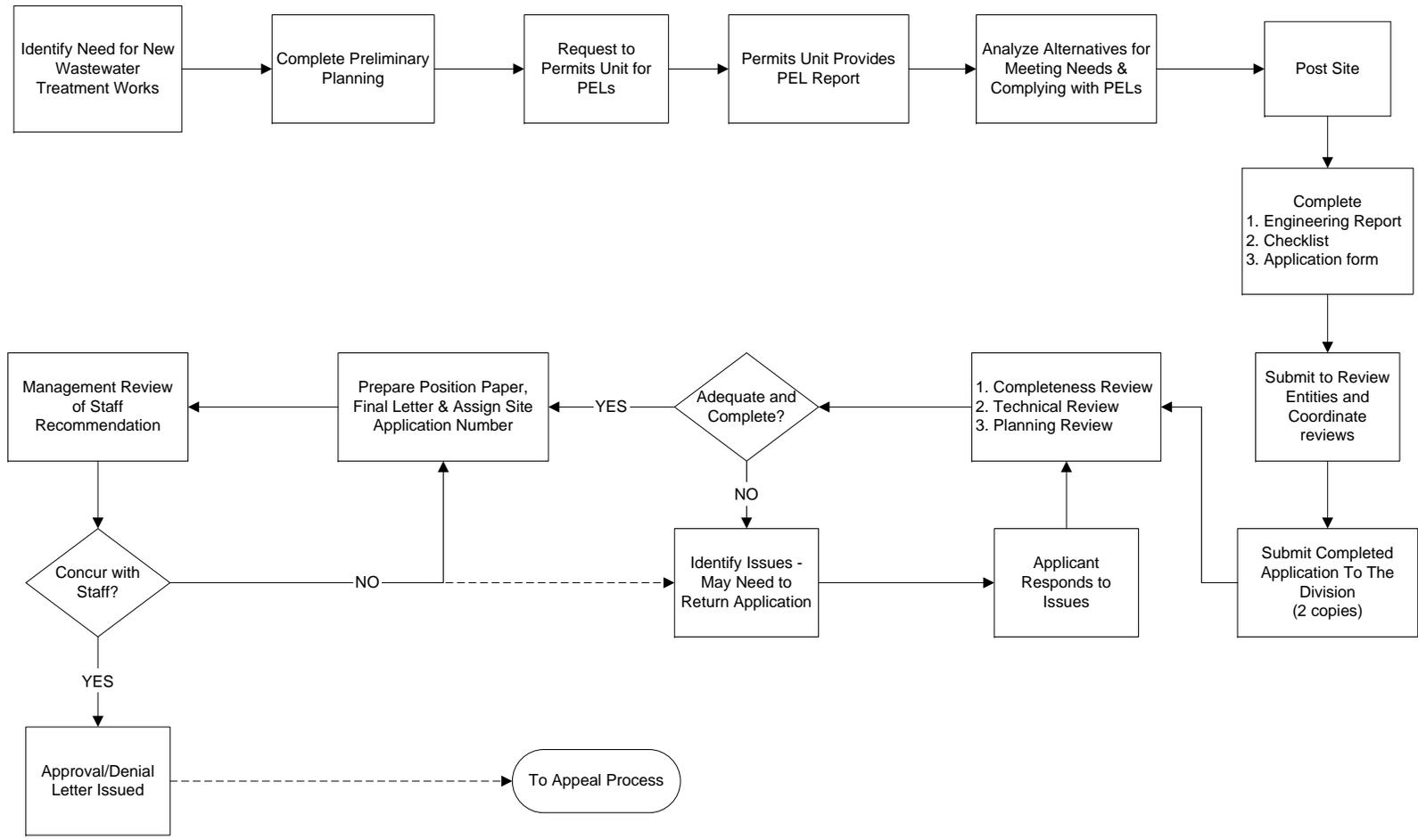
2.2.5 Filling Out the Completeness Checklist

Filling out the Completeness Checklist provides assurance that the Site Application Package is complete and the applicant is aware of all the elements of the application that Division staff will be reviewing. Submitting a complete and adequate Site Application Package following the guidance provided herein is the best approach to assisting the Division in expeditiously completing its review.

2.2.6 Reviews by Other Agencies

Reviews by other Agencies are necessary prior to submitting the Site Application Package to the Division. The applicant will need to forward the Site Application Package (the completed forms, checklist and engineering report) to these other reviewing management agencies. The review agencies will review the Site Application Package in accordance with their plans, policies and regulations, which may include the regional water quality management plan. The review agencies may recommend approval or denial of the project and offer comments based on local considerations. Applicants are advised to stay involved in the process and follow-up with these agencies to provide any additional information they may require and ensure that the Site Application Package is reviewed in a timely fashion.

Figure 3
Site Application Review Process
for New Domestic Wastewater Treatment Works



2.2.7 Specific Guidance To Meet The Requirements Of Regulation No. 22 Section 22.4 For New Domestic Wastewater Treatment Works

This section is intended for:

- new wastewater treatment facilities,
- replacement of an existing wastewater treatment plant on a new site that has not received site location approval,
- construction of new treatment facilities that will produce reclaimed domestic wastewater if those facilities are located on a site that has not previously received site location approval or at a different site from the secondary treatment plant location, and
- Septic tank/soil absorption field systems designed to treat average daily flows of 2,000 gallons per day or more.

Guidance for each section of Regulation No. 22.4 is provided below.

Section 22.4(1) New treatment works

The application for site location approval of any proposed new domestic wastewater treatment works, except for interceptor sewers and lift stations as described below in sections 22.6 and 22.7, shall be made to the Division on the proper form. Prior to submitting the form to the Division, the application must be submitted to the local authorities and the 208 planning agency for review and comment in accordance with section 22.4(2). These application procedures also apply to proposals to move outfall sewers from the approved site location to another site. These application procedures also apply to proposals to construct new treatment facilities that will produce reclaimed domestic wastewater if those facilities are to be constructed at a site location that has not been previously approved by the Division or at a different site from the secondary treatment plant location.

Section 22.4 (1)(b)(i) Service area and site location

The service area may be defined in a number of ways though the approach taken will most likely be determined by the nature of the area to be served. A municipality or special district can most easily describe the service area by providing a map of the area to be served. A smaller service area might be addressed by means of the legal description of the property/properties to be served or even by describing the use or uses included in the service area – i.e. Sunrise Subdivision, Riverview Middle School, or Prairies Edge Shopping Center.

Similarly, the existing and projected population figures are likely to be dictated by the nature of the service area. For communities, special districts and developments including residential uses, the most common approach will be the use of the “Population Equivalent” or “PE.” Each PE represents the equivalent of one person in terms of wastewater generation. This is generally 100 gallons per person per day, per the Design Criteria, or may reflect actual flow values as determined by the community/development in question. Single use service areas, such as schools, churches, resorts or recreation areas may describe numbers of staff and visitors with projected flows per staff person and per visitor. Acceptable per capita flow values for such non-residential uses may be adapted from the Guidelines On Individual Sewage Disposal Systems.

The proposed site location should be depicted on a map with sufficient detail to allow the Division to evaluate the location of the proposed facilities. The proposed location should also be described via the legal description of the site, in ¼, ¼ Section, Township, Range terms (or as otherwise requested on the application form). This description should reflect the location of the

proposed wastewater treatment and disposal/discharge facilities and not only the total property of the development, etc.

Any staging or phasing of the project should be identified to the extent possible if it is known that the total build out of the facilities will not occur in a single construction effort. If approval is being requested for multiple construction phases, as opposed to the intent to request approval for each phase as capacity is needed, it is imperative that all elements of the engineering report fully address each phase for which approval is being requested. If approval is only being requested for a single phase, the identification of future intent can assist the Division and the applicant in understanding issues that might arise with larger scale development and discharges.

Flow and loading are directly related to the service area and population projection values described above. The service area will have finite development capabilities dependent upon assumptions made by the land use agency for the area and generally as described in a comprehensive plan for the area. Population projections for the service area should be presented for a 20-year period, or to build-out if less than 20 years. Similarly, flow loadings; based on the identified service area development and population projections, together with per capita wastewater generation data or assumptions, including industrial/commercial contributions, are to be generated for the 20-year (or to build-out) period. The projected service area populations, as defined by build out or such other means as might be employed in the facility planning effort, multiplied by the per capita flow, will generate the total service area flow. Multiplier values to describe peak flow values for monthly, daily, and/or hourly flow variables used to design unit treatment processes should be identified. The peak month average daily flow should be used for describing flow and loading values.

The relationship of the proposed facilities to other water and wastewater treatment plants in the area should be depicted on a map, as requested on the application form, as well as in the engineering report in narrative form. The narrative should address issues that may not be included on, or evident by, the map. These may include issues of topography, geology, threatened or endangered species habitat, development patterns, wetlands, and other factors that may contribute to decisions regarding consolidation feasibility or potential water quality conflicts, i.e. multiple discharges within a stream segment or the physical relationship between water supply intakes and effluent outfalls. Refer to the discussion in section 22.4(1)(b)(v) below.

Section 22.4 (1)(b)(ii) Site location selection

The proposed site location itself should have been adequately described in the previous section. In this section, the engineering report should focus on describing the process resulting in the selection of the proposed site. This would include a description of other sites considered and the criteria for selecting the site. This can be combined with the evaluation of treatment alternatives as a given site may limit the treatment alternatives that may be viable on a site due to physical limitations, such as site size or geologic conditions, land acquisition costs and/or obstacles, or the proximity to habitable structures and potential for nuisance conflicts arising.

The analysis of treatment alternatives does not dictate that a specific number of alternatives be considered. However, given the Division's legislative directive to "encourage consolidation wherever feasible," consolidation with existing or proposed wastewater treatment facilities does need to be discussed. Refer to the discussion related to section 22.4(1)(b)(v) below.

Alternatives for providing the appropriate capacity and degree of treatment, as described in the Preliminary Effluent Limits (PELs), should be generated and the process by which the preferred alternative was selected should be described. The selection criteria often include, but are not limited to, capital costs, projected operation and maintenance (O & M) costs, ease of operation, and flexibility for phased expansions. Small facilities, having a design capacity of less than 50,000 gallons per day will generally have fewer options available to them and will thus generate less sophisticated alternatives analyses. This does not, however, preclude the need to address the issue of the potential for consolidation, whether that is of the proposed service area being served by another existing or proposed treatment facility or of the proposed facility being constructed to serve existing or proposed service areas.

Section 22.4 (1)(b)(iii) Preliminary Effluent Limitations

Include the PELs report generated by the Division, or generated by the applicant in consultation with the Division. The applicant should be familiar with policy (WQSA-2) pertaining to the capacity of the site. The capacity used to develop the PELs must be the same or lower as those requested in the Site Application Package. If the proposed capacity is significantly lower than the capacity the PEL's were originally based on, the applicant may want to consider requesting new PEL's based on the lower capacity. This will be the capacity used in reviewing the design plans and specifications and will be the stated capacity in the discharge permit. Please refer to section 7.0 for more detailed information on the PEL process.

Section 22.4 (1)(b)(iv) Analysis of existing facilities

The analysis of the loading, capacity and performance of any relevant existing facilities within the applicant's service area(s) will be applicable only to those applicants having existing facilities of relevance within their service area(s). This situation will most frequently occur when a community or district is proposing to construct a new facility at a different site to replace an existing facility. If an area with a history of failed or failing septic systems is nearby or is incorporated into a service area, that general condition probably warrants discussion along with a description of alternatives or a plan to resolve the issue. When relevant wastewater treatment facilities within the applicant's service area do exist, those facilities should be described with respect to location, ownership, present flows, design capacities of the unit processes, and condition of the facilities. The intent to consolidate, or not consolidate, those facilities into the proposed new treatment works should be discussed, as should the timing of such consolidation.

Section 22.4 (1)(b)(v) Consolidation analysis

Opportunities for consolidation have been discussed in various sections preceding this. However, the importance of this issue warrants a separate discussion. The Water Quality Control Act directs the Division, as part of the site location approval process, to "encourage the consolidation of treatment plants, whenever feasible." Please refer to Policy WQSA #5 for specific criteria employed by the Division with respect to considering consolidation issues. In addition to being a legislative directive, consolidation is often a matter of fiscal responsibility for entities funding facilities with public monies. Even those facilities developed with private funding often rely on user fees to fund operation and maintenance of the facilities. Consolidation can offer significant capital and operational cost savings through economies of scale, i.e. the unit cost (dollars per gallon) is often lower to construct and operate a single large facility than to construct and operate a number of small facilities.

All applications for the construction of new domestic wastewater treatment works need to include a discussion of the feasibility of consolidation as a component of the alternatives analysis. If there are no other wastewater treatment facilities existing or being proposed within a five mile radius of the proposed site, then the Division will not require further analysis unless the approved water quality management plan for the region recommends otherwise. If other facilities do exist, or are proposed, an analysis of feasibility does need to be undertaken. This analysis may be abbreviated if there are factors that preclude consolidation. These factors may include, but are not limited to: water rights issues that limit the applicant's ability to move the effluent to another location for discharge; reuse opportunities for the new facility, costs, management or operational limits at the existing facility, intervening public lands that cannot be crossed (i.e. national park, wilderness area, etc.); intervening lands that should not be crossed (i.e. wetlands, threatened and endangered species habitat, or such other categories as may be protected under local land use policies and/or regulations, etc.); water quality limitations for the receiving waters, TMDLs, or compliance schedules or advisories for the existing wastewater treatment plant, or significant topographical or geological barriers such as mountain ranges or canyons.

Unless significant obstacles to consolidation can be shown to exist, a financial analysis of the consolidation option or options is to be developed and included in the engineering report. This analysis should include all aspects of implementing a consolidated facility. Such cost factors as land acquisition, logistical issues with construction of transmission pipelines, capital construction, removing any facilities to be abandoned, and facilities operation and maintenance should be included. Financial benefits realized, such as the value of land reclaimed and reuse water should also be factored into the considerations.

In the event that the approved water quality management plan acknowledges the existence of, or a proposal for multiple domestic wastewater treatment works and recommends that no consolidation of these facilities occur, the Division will waive the requirement for the analysis of consolidation. However, inclusion of the multiple facilities in the water quality management plan does not constitute a recommendation of no consolidation.

Note that consolidation, and the benefits that can be realized from consolidation, are not limited to the question of whether there is to be one or more treatment works. Treatment service providers have benefited from consolidating portions of the overall treatment process such as solids handling while maintaining separate facilities for the liquid portion of the waste stream. Consolidation of administrative elements of operating multiple facilities can also provide benefits and resources to the entities involved through shared expertise and eliminating duplicative processes and resources.

Section 22.4 (1)(b)(vi) Floodplain/hazards analysis

The applicant is responsible for identifying natural hazards such as floodplains, avalanche chutes, soil or rockslide areas and faults that may adversely affect the suitability of the proposed site. Sometimes these hazards can be mitigated through design and construction measures specifically intended to compensate for the risks presented by that hazard. Where natural hazards exist, the engineering report shall describe the nature and extent of the hazard and identify how the facility will be designed and constructed to mitigate the potential effects of the hazard on the facility and its ability to function. In the event of a site subject to flooding, the

Division expects the facility to be capable of receiving, treating, and discharging wastewater from its service area in the event of a 100-year flood event.

Section 22.4 (1)(b)(vii) Soils Report

A site specific study of the soils and geology at the site of the proposed domestic wastewater treatment works is required for all new treatment works sites. The study must include soils testing from the site of the proposed treatment works. It must be prepared by a Professional Geologist, a Geotechnical Engineer or by a professional meeting the qualifications of both Professional Geologist and Geotechnical Engineer, with an appropriate level of experience investigating geologic hazards. The report should address the suitability of the specific treatment works site to accommodate the specific type of treatment processes being proposed. The report needs to identify any limiting conditions of the site and include specific recommendations for addressing those limitations. Finally the preparer(s) must state that the site will support the proposed facility, subject to following the recommendations of the report. The applicant must state that the facility design will consider specific recommendations and those recommendations must be addressed in the design.

Note: Generic reports of the overall conditions observed over a large development area or an adjacent site do not meet the requirements of this element and cannot be accepted in lieu of the site specific study.

Section 22.4 (1)(b)(viii) Description of selected treatment process

The detailed description of the selected alternative needs to provide specific information regarding what the applicant intends to construct and the resources needed to operate the facilities. All treatment processes to be included should be identified in this section of the engineering report. Rather than identify the facility as providing secondary treatment or including ammonia removal, the description of the selected alternative should describe the specific treatment processes that will be utilized to meet the PELs. This will include a process for secondary treatment and disinfection and may include processes for nutrient removal, dechlorination, and/or processes for reducing or eliminating other wastewater constituents.

The treatment capacity is to be addressed in sufficient detail for the reviewer of design documents and the preparer of any applicable discharge permit to understand the applicant's intent. In addition to calculations of an average daily flow capacity, a peak month flow capacity for the proposed plant must be provided. Daily and/or hourly peak flows should be identified when design elements are intended to address these flows. For systems subject to the ISDS Regulations a peak daily flow figure is required as well as the average daily design flow.

Operational staffing needs should be identified and be appropriate for the proposed facility. All proposed facilities should address the level of operator certification required and the extent of staffing appropriate to the type of facility and the nature of the service area. These considerations should have been included as part of the operations and maintenance element in any financial analysis of treatment alternatives considered in previous sections.

Section 22.4 (1)(b)(ix) Legal control of the site

The applicant may demonstrate control of the site via a number of options depending on the nature of that control mechanism. The best evidence is a copy of the deed or title to the property in the name of the applicant. In lieu of a deed, a copy of the title insurance may be provided,

though the applicant must be sure that the title insurance document does not contain errors regarding ownership, property description, or limitations or restrictions that would preclude using the property for its intended purpose.

If the applicant is in the process of acquiring the property from the present owner, a copy of a purchase option or other written communication from the documented owner (including proof of that individual's ownership as described above) will suffice. The document(s) should indicate the intent to sell or otherwise convey control of the site to the applicant for the intended use or uses. Any limitations or restrictions such as access restrictions or term limitations should be disclosed. If the applicant intends to utilize their authority to condemn the site, a letter indicating the intent and ability to condemn, documentation of a condemnation filing or a written narrative in the engineering report documenting the authority to condemn the site and stating that it is the applicant's intent to condemn the site to gain control of it must be provided.

If the applicant controls but does not own the property, a lease or easement from the documented owner will be acceptable. However it should be clear, either through the lease, easement, documentation of filing for condemnation, letter indicating the intent and ability to condemn, or otherwise in writing that the applicant has the authority to utilize the site for the purpose of constructing and maintaining the proposed domestic wastewater treatment works. Limitations that might affect the applicant's ability to construct or operate the proposed facilities for the life of those facilities or for the life of the structures/facilities to be served should be disclosed, i.e. holding a 20-year lease on a site proposed for a treatment works to serve private residences that will require service well beyond the 20-year period will need to be addressed.

Section 22.4 (1)(b)(x) Institutional arrangements

Institutional arrangements may not exist in all circumstances. Camps, campgrounds, schools, and other single use service areas are unlikely to have need for such arrangements as the costs associated with the construction, operation and maintenance are built in to the cost of doing business and separate charges or fees are not assessed for the wastewater service. When a treatment entity serves multiple users, or multiple service areas, a mechanism needs to be in place to assure the generation of sufficient revenues to pay for the necessary level of wastewater treatment. This generally includes a means of covering capital costs as well as a means of providing adequate funding for operations and maintenance and a reserve for replacement. While a developer may opt to recover capital costs by including them in the sale price of the land parcels or constructed units, capital costs are more frequently the subject of a loan or bonds that must be repaid with interest. An applicant needs to have an appropriate mechanism in place to assure the ability to collect appropriate fees from the wastewater treatment system users. The applicant may require contracts with individual users or with other service areas to be included, may incorporate covenant terms applicable to all development within the service area, though covenants may be difficult to enforce, or may adopt fee ordinances as appropriate. The particular mechanism to be employed is to be identified and a copy of the terms, final or draft must be included.

Section 22.4 (1)(b)(xi) Management capability

Management capabilities refer to the applicant's abilities to control what is conveyed to the treatment plant in terms of wastewater quantity and quality. These issues may be addressed by means of contracts, covenants, use ordinances, pretreatment requirements or regulations or such other written arrangements or restrictions as are applicable or necessary. In those circumstances

where capacity in a treatment works is shared between two or more entities, it is appropriate that formal agreements exist with respect to the sharing of capacity and the timing and terms for initiating expansion of capacity. Copies of any documents associated with managing the issues described should be provided.

Section 22.4 (1)(b)(xii) Financial capability

The financial system associated with constructing, operating and maintaining the proposed facilities needs to include evidence of sufficient financial resources to construct the facility as well as a financial plan to generate revenue sufficient to repay any indebtedness and cover ongoing operational expenses. If the applicant intends to finance the project independently, evidence of such financial capability in the form of written communication from a financial institution attesting to the entity's possession of adequate capital to undertake the proposed project is required. In the event that a loan is to be utilized, a letter from the financial institution, bond adviser, or other loan program indicating its intent to make such a loan for the purpose of constructing the proposed wastewater treatment facilities is necessary.

Publicly financed facilities will address capital construction capabilities via other means. Available cash resources can be reflected by providing a copy of the current budget documents. Loans and/or grants can be documented via communication from the agency providing those funds or via elements of the state's revolving loan fund application, if applicable. The use of bonds is most frequently addressed by providing a copy of the report from the bond adviser or intended bond underwriter.

All applicants utilizing borrowed funds need to develop and present a financial plan for repaying those borrowed funds together with any fees and interest associated with the transaction. Such plan should address the full term of the payback period and not just demonstrate a pattern of anticipated revenue generation. The financial plan should identify such fee structure as is applicable to the retirement of capital costs associated with the infrastructure as well as any expansion/replacement fund. These may include plant investment fees and availability of service fees. Public entities in particular may include this information in budget documents and thus may be able to adequately address this element by providing current and projected budget documents.

All applicants charging fees for service need to present a financial plan for the continued operation and maintenance of the facilities. The annual and projected budgets should address the revenue generation and cost projection figures associated with this element.

Any additional documentation regarding fee and rate structures associated with construction, operation and maintenance, and replacement should be incorporated into or provided as an attachment to the engineering report.

Section 22.4 (1)(b)(xiii) Schedule

An implementation plan and schedule is the final element of the engineering report. This may be presented in the form of a time line (graph) or in narrative form. It must include, at a minimum, the estimated time to construct the proposed facilities from the commencement of construction to start-up, and the projected start-up dates. Additional information, such as projected site approval, design submittal, design approval, and bid award dates can assist the Division staff in visualizing the applicant's overall schedule but are not required.

In the event that the applicant is requesting approval of more than one construction phase in the approval, an implementation plan and schedule including estimated construction time, from start to completion, an estimated start-up date must be provided for each phase. If capacity needs are to be addressed through phased construction, that phasing must be shown in the approved Water Quality Management Plan and/or in appropriate local plans or engineering studies unless already approved through the site location approval process.

Note: The construction time is measured in units of time, i.e. days, weeks, or months, while the estimated start-up date is a calendar related event, i.e. a month and year.

Section 22.4(1)(c) Discharge across private property

If the proposed domestic wastewater treatment plant will discharge treated effluent through a conveyance structure, easement, right-of-way or other access onto or across private property of another person the applicant must furnish to the Division evidence that a notice of intent to construct a new domestic wastewater treatment works has been provided to the owner of such property. It would also be helpful to provide any available supporting information regarding easements and/or agreements with property owners. Obtaining site location approval does not convey any property rights to the applicant. Similarly, obtaining a discharge permit does not convey any property rights to the discharger.

Section 22.4(2) Review by other agencies

The applicant's next step is submitting the Site Application Package that includes the application form and engineering report as described in Section 22.4(1)(b) to the appropriate review agencies. The review agencies will evaluate the site application based on each agency's plans, policies, rules, and regulations, which may include the regional wastewater management plan for the area should such a plan exist. The Division has developed the Utility Planning and Facility Siting Policy WQSA-1 regarding the site application's consistency with the water quality related elements of a local long-range comprehensive plan and/or wastewater management plan.

The applicant must perform all necessary coordination and supply all information to the review agencies. The applicant is responsible for obtaining all necessary signatures on the site application form before sending it to the Division. These agencies include but are not limited to appropriate local governments, county, city or town, local health authority, 208 planning agency, and other state or federal agencies if appropriate. The Colorado Municipal League (CML) publishes a directory of Municipal and County Officials in Colorado annually that contains contact information for many of the agencies listed above. The CML can be reached at (303) 831-6411 or www.cml.org. After receiving the site location, application the reviewing agencies have sixty (60) days to review and comment on the application and make a recommendation to the Division.

After the sixty (60) day period, if the applicant has not received comments or recommendation of approval from the reviewing agency the applicant may forward the application to the Division without such comments and/or recommendations. The Division will contact the reviewing agency and provide a period of seven (7) additional days for the agency to provide comments or recommendation or to explain the absence of such comments and/or recommendations.

Section 22.4(3) Posting the site

In order to provide the public with an additional opportunity to provide input, the site must be posted following the requirements listed in Section 22.4(3)(b) of Regulation No. 22 unless posted in accordance with local permitting requirements. The sign must be posted for a minimum of fifteen days prior to the time the site application is submitted to the Division. However, the Division should be notified of the project at the time of the posting so that necessary public information can be made available. A photograph of the sign or other documentation certifying that this posting requirement has been met must be included in the Site Application Package.

SITE APPLICATION COMPLETENESS CHECKLIST

New Domestic Wastewater Treatment Works (includes New Reuse Plant)

Name of Project:

Applicant Name and Address:

Consultant Name and Address:

Type of Project:

Section	Elements	Please indicate where (document and page #) the submittal addresses the following
22.4(1)	Application submitted on proper form.	
	Recommendation of local authorities and planning agencies.	
	Signed by responsible party of the proposed facility.	
	Two copies submitted to CDPHE.	
22.4(1)(b)	Engineering Report.	
22.4(1)(b)(i)	Service area definition.	
	Staging or phasing.	
	Flow/loading projections.	
	Relationship to other water and wastewater treatment works	
22.4(1)(b)(ii)	Proposed site location.	
	Evaluation of alternative sites.	
	Evaluation of treatment alternatives.	
22.4(1)(b)(iii)	Proposed effluent limitations	
	Date of PELs.	
22.4(1)(b)(iv)	Analysis of existing facilities within service area(s).	

22.4(1)(b)(v)	Analysis of opportunities for consolidation	
22.4(1)(b)(vi)	Proposed site adversely affected by floodplain etc.	
22.4(1)(b)(vii)	Soils Report stating that the site will support the facility.	
22.4(1)(b)(viii)	Detailed description of selected alternative	
22.4(1)(b)(ix)	Legal control of the site for the project life	
22.4(1)(b)(x)	Institutional arrangements	
22.4(1)(b)(xi)	Management capabilities	
22.4(1)(b)(xii)	Financial system	
22.4(1)(b)(xiii)	Implementation plans and schedule	
	Estimated construction time	
	Estimated start-up date.	
22.4(1)(c)	Notice of the intent to construct for private property.	
22.4(2)(a)	Review comments by the management agency if necessary	
22.4(2)(b)	Review comments by the county if necessary	
22.4(2)(c)	Review comments by the city or town if necessary	
22.4(2)(d)	Review comments by the local health authority.	
22.4(2)(e)	Review comments by the water quality planning agency	
22.4(3)	State or Federal review comments if necessary	
22.4(3)	A picture of the public notification sign.	

2.3 General Information and Flow Chart

This section provides information for applicants seeking approval for new outfall sewers that are not located on a previously approved site or proposed to discharge to a different segment of the stream or river. A flow chart depicting the site application review process for outfall sewers is provided in Figure 4.

2.3.1 Preliminary Planning for New Outfall Sewers

New outfall sewers would typically involve determining the course of the sewer line, property ownership of the entire length of the outfall sewer, and the discharge point, i.e. receiving water body segment. A consultant is often retained during the preliminary planning stage and a consulting engineer will be necessary for many of the subsequent steps, e.g. preparing an engineering report. Your consulting engineer must be a Professional Engineer registered in the State of Colorado, and experienced in wastewater management issues. It is also advisable to contact the Division at this point to discuss the project and receive initial input. The applicant should discuss their plans with either the District Engineer for their area or the Site Application Coordinator. The Division has divided the state into a number of geographic areas each assigned to a specific District Engineer. The County in which the project is to be located will determine which District Engineer to contact. This information is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

2.3.2 Preliminary Effluent Limits

If the outfall sewer will be discharging to a different stream segment or different water body new PELs will be necessary. If the new outfall sewer will be discharging to the same stream segment, PELs may not be necessary. Check with the District Engineer or Site Application Coordinator to determine if PELs are necessary for the site application. It is important to submit a site application to the Division with complete PELs, if they are necessary. Additional information regarding PELs can be found in Section 7.0.

A separate submittal to the Division is necessary to request PELs and this must be done in advance of developing the final report, and submitting the site application. Developing the PELs requires assessing the potential impact of the discharge from a domestic wastewater treatment works on the water quality in the receiving stream and/or ground water.

2.3.3 The Engineering Report

The engineering report provides the information necessary for the Division to evaluate the applicant's proposed outfall sewer and ability to manage and operate the outfall sewer over the life of the project. The engineering report includes:

- a description of the project,
- brief description of the existing facility (if any),
- flow and loading calculations both present and projected,
- PELs if necessary,
- soil investigations, flood plain location, wetland areas, water rights impacts, and additional considerations may need to be identified in this report.

The report must include an implementation schedule with estimated construction time and an estimated start-up date.

2.3.4 Site Application Forms

Forms are available on the Water Quality Control Division's web site at www.cdphe.state.co.us/wq/tech/reg22/siteappforms/sa_form_hom.html or will be mailed upon request. The District Engineer or the Site Application Coordinator can assist you with selecting and filling out the appropriate site application form.

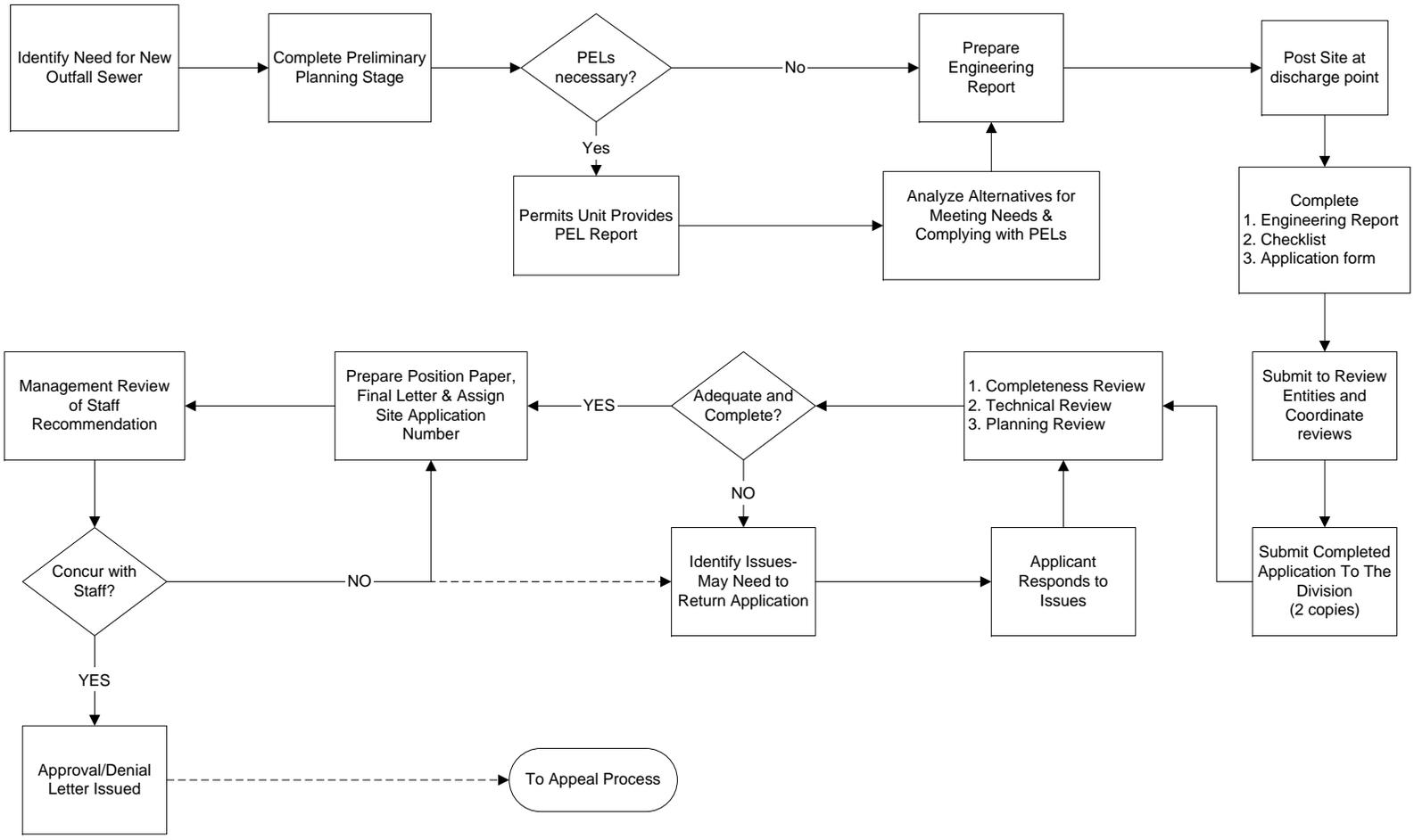
2.3.5 Filling Out the Completeness Checklist

The checklist provides assurance that the site application is complete and the applicant is aware of all the elements of the application that the Division staff will be reviewing. Submitting a complete and adequate Site Application Package following the guidance provided herein is the best approach to assisting the Division to expeditiously complete its review.

2.3.6 Reviews by Other Agencies

Reviews by other agencies are necessary prior to submitting the Site Application Package to the Division. The applicant will need to forward the Site Application Package (the completed forms, checklist and engineering report) to these other reviewing agencies. They will review the Site Application Package in accordance with their policies and regulations, which may include the regional water quality management plan. They may recommend approval or denial of the project and offer comments based on local considerations. Staying involved in the process and following up with these agencies to provide any additional information they may require will help ensure that the Site Application Package is reviewed in a timely fashion.

Figure 4
Site Application Review Process
for New Outfall Sewer



2.3.8 Specific Guidance To Meet The Requirements Of Regulation No. 22 Section 22.4 For New Outfall Sewers

This section only applies to outfall sewers that are not located on a previously approved site or proposed to discharge to a different segment of the stream or river. If the new outfall sewer will be located on a site that has previously received site approval and the discharge will occur in the same stream segment, a site application is not required.

Section 22.4 New treatment works

The application for site location approval of any proposed new domestic wastewater treatment works, except for interceptor sewers and lift stations as described below in sections 22.6 and 22.7, shall be made to the Division on the proper form. Prior to submitting the form to the Division, the application must be submitted to the local authorities and the 208 planning agency for review and comment in accordance with section 22.4(2). These application procedures also apply to proposals to move outfall sewers from the approved site location to another site. These application procedures also apply to proposals to construct new treatment facilities that will produce reclaimed domestic wastewater if those facilities are to be constructed at a site location that has not been previously approved by the Division or at a different site from the secondary treatment plant location.

Guidance for each subsection of 22.4 in Regulation No. 22 is provided below.

Section 22.4 (1)(b)(i) Service area

The service area for the treatment plant discharging to the outfall sewer may be described very briefly.

The proposed site location should be depicted on a map with sufficient detail to allow the Division to evaluate the location of the proposed outfall sewer. The proposed location should also be described via the legal description of the site, in ¼, ¼ Section, Township, Range terms (or as otherwise requested on the application form). This description should reflect the location of the proposed outfall sewer.

The discharge flow from the treatment plant should be specified. Multiplier values to describe peak flow values for monthly, daily, and/or hourly flow variables used to design unit treatment processes should be identified. The peak month average daily flow should be used for describing flow and loading values. Of course the outfall sewer will need to be sized to handle the expected instantaneous maximum flow and be capable of discharging during 100-year flood conditions.

The relationship of the proposed outfall sewer to other water and wastewater treatment works in the area should be depicted on a map, as requested on the application form, as well as in the engineering report in narrative form. The narrative should address issues that may not be contained on, or evident by the map. These may include issues of topography, geology, endangered species habitat, development patterns, wetlands, and other factors that may contribute to decisions regarding consolidation feasibility or potential water quality conflicts, i.e. multiple discharges within a stream segment or the physical relationship between water supply intakes and effluent outfalls.

Section 22.4 (1)(b)(ii) Site location selection

Here the engineering report focuses on describing the process resulting in the selection of the proposed site. This would include a description of other sites considered and the criteria for selecting the site.

Section 22.4 (1)(b)(iii) Preliminary Effluent Limits

Include the PEL report generated by the Division, or generated by the applicant in consultation with the Division if necessary. Please refer to section 7.0 for more detailed information on the PEL process.

Sections 22.4 (1)(b)(iv) and 22.4(1)(b)(v) Consolidation analysis

For outfall sewers, information related to an analysis of the loading, capacity and performance of any relevant existing facilities within the applicant's service area(s) will not be needed to complete the site application. However, if the outfall sewer will transport the treated effluent near relevant wastewater treatment facilities within the applicant's service area, then those facilities should be described with respect to location, ownership, present flows, design capacities of the unit processes, and condition of the facilities. The intent to consolidate, or not consolidate, those facilities should be discussed.

Please refer to Policy WQSA #5 for specific criteria employed by the Division with respect to considering consolidation issues if an analysis of feasibility needs to be undertaken.

Section 22.4 (1)(b)(vi) Floodplain/hazards analysis

The applicant is responsible for identifying natural hazards such as floodplains, avalanche chutes, soil or rockslide areas and faults that may adversely affect the suitability of the proposed site. Sometimes these hazards can be mitigated through design and construction measures specifically intended to compensate for the risks presented by that hazard. Where natural hazards exist, the engineering report shall describe the nature and extent of the hazard and identify how the outfall sewer will be designed and constructed to mitigate the potential effects of the hazard on the outfall sewer and its ability to function. In the event of a site subject to flooding, the Division expects that the outfall sewer be capable of discharging wastewater from the treatment plant it services in the event of a 100-year flood event.

Section 22.4 (1)(b)(vii) Soils Report

A site specific study of the soils and geology at the site of the proposed outfall sewer is required. The study must include soils testing from the site of the proposed outfall sewer. It must be prepared by a Professional Geologist, a Geotechnical Engineer or by a professional meeting the qualifications of both Professional Geologist and Geotechnical Engineer, with an appropriate level of experience investigating geologic hazards. The report should address the suitability of the specific site to accommodate the outfall sewer. The report needs to identify any limiting conditions of the site and include specific recommendations for addressing those limitations. Finally the preparer(s) must state that the site will support the proposed outfall sewer, subject to following the recommendations of the report. The applicant must state that the outfall sewer design will consider specific recommendations and those recommendations must be addressed in the design.

Note: Generic reports of the overall conditions observed over a large development area or an adjacent site do not meet the requirements of this element and cannot be accepted in lieu of the site specific study. However, it is recognized that an outfall sewer may be of substantial length. A reasonable approach to addressing the situation if the outfall sewer is expected to cross a variety of soil conditions needs to be provided.

Section 22.4 (1)(b)(viii) Description of selected treatment process

Sufficient information regarding the site description and design capacity for an outfall sewer should have been provided earlier and it would not be expected that additional operational staffing needs would need to be considered. Thus, addressing this section separately is not required.

Section 22.4 (1)(b)(ix) Legal control of the site

The applicant may demonstrate control of the site via a number of options depending on the nature of that control mechanism. The best evidence is a copy of the deed or title to the property in the name of the applicant. In lieu of a deed, a copy of the title insurance may be provided, though the applicant must be sure that the title insurance document does not contain errors regarding ownership, property description, or limitations or restrictions that would preclude using the property for its intended purpose.

If the applicant is in the process of acquiring the property from the present owner, a copy of a purchase option or other written communication from the documented owner (including proof of that individual's ownership as described above) will suffice. The document(s) should indicate the intent to sell or otherwise convey control of the site to the applicant for the intended use or uses. Any limitations or restrictions such as access restrictions or term limitations should be disclosed. If the applicant intends to utilize their authority to condemn the site, documentation of a condemnation filing or a written narrative in the engineering report documenting the authority to condemn the site and stating that it is the applicant's intent to condemn the site to gain control of it must be provided.

If the applicant controls but does not own the property, a lease or easement from the documented owner will be acceptable. However it should be clear, either through the lease, easement, documentation of filing for condemnation, or otherwise in writing that the applicant has the authority to utilize the site for the purpose of constructing and maintaining the proposed outfall sewer. If the applicant intends to utilize their authority to condemn the site, a letter indicating the intent and ability to condemn, documentation of a condemnation filing or a written narrative in the engineering report documenting the authority to condemn the site and stating that it is the applicant's intent to condemn the site to gain control of it must be provided. Limitations that might affect the applicant's ability to construct or operate the proposed outfall sewer for its expected life should be disclosed, i.e. holding a 20-year lease on a site proposed for a treatment works to serve private residences that will require service well beyond the 20-year period will need to be addressed.

Sections 22.4 (1)(b)(x) and (xi) Institutional arrangements and management capability

Addressing these items is not necessary for outfall sewers, unless the applicant's institutional arrangements and management capabilities will be impacted.

Section 22.4 (1)(b)(xii) Financial capability

A brief description of how the capital cost of the project will be financed will suffice to meet this requirement for outfall sewers in most cases. If the ongoing operation and maintenance costs for the sewer represent a significant percentage of the overall operating and maintenance costs for the overall treatment works, then providing additional budget information is necessary.

Section 22.4 (1)(b)(xiii) Schedule

An implementation plan and schedule is the final element of the engineering report. This may be presented in the form of a time line (graph) or in narrative form. It must include, at a minimum, the estimated time to construct the proposed outfall sewer from the commencement of construction to start-up, and the projected start-up date.

Note: The construction time is measured in units of time, i.e. days, weeks, or months, while the estimated start-up date is a calendar related event, i.e. a month and year.

Section 22.4(1)(c) Discharge across private property

If the proposed outfall sewer will discharge treated effluent through a conveyance structure, easement, right-of-away or other access onto or across private property of another person the applicant must furnish to the Division evidence that a notice of intent to construct a new domestic wastewater treatment works has been provided to the owner of such property. It would also be helpful to provide any available supporting information regarding easements and/or agreements with property owners.

Section 22.4(2) Review by other agencies

The applicant's next step is submitting the Site Application Package that includes the application form and engineering report as described in Section 22.4(1)(b) to the appropriate review agencies. The review agencies will evaluate the site application based on each agency's plans, policies, rules and regulations, which may include the regional wastewater management plan for the area should such a plan exist. The applicant must perform all necessary coordination and supply all information to the review agencies. The applicant is responsible for obtaining all necessary signatures on the site application form before sending it to the Division. These agencies include but are not limited to appropriate local governments, county, city or town, local health authority, 208 planning agency, and other state or federal agencies if appropriate. The Colorado Municipal League (CML) publishes a directory of Municipal and County Officials in Colorado annually that contains contact information for many of the agencies listed above. The CML can be reached at (303) 831-6411 or www.cml.org. After receiving the site location application the reviewing agencies have sixty (60) days to in which to review and comment on the application and make a recommendation to the Division.

After the sixty (60) day period, if the applicant has not received comments or recommendation of approval from the reviewing agency the applicant may forward the application to the Division without such comments and/or recommendations. The Division will contact the reviewing agency and provide a period of seven (7) additional days for the agency to provide comments or recommendation or to explain the absence of such comments and/or recommendations.

Section 22.4(3) Posting the site

In order to provide the public with an additional opportunity to provide input, the site must be posted following the requirements listed in Section 22.4(3) of Regulation No. 22 unless posted in

accordance with local permitting requirements. The location of the outflow sewer public notice sign should be at the discharge point. However, it is recognized that outfall sewers running some distance may not be confined to a single “site”. Applicants may make additional postings along the proposed route of the outfall sewer in situations where the sewer will extend for long distances or across multiple “sites.”

The sign must be posted for a minimum of fifteen days prior to the time the site application is submitted to the Division. However, the Division should be notified of the project at the time of the posting so that necessary public information can be made available. A photograph of the sign or other documentation certifying that this posting requirement has been met must be included in the Site Application Package.

SITE APPLICATION COMPLETENESS CHECKLIST New Outfall Sewers

Name of Project:

Applicant Name and Address:

Consultant Name and Address:

Type of Project:

Section	Elements	Please indicate where (document and page #) the submittal addresses the following
22.4(1)	Application submitted on proper form.	
	Signature from local authorities and planning agencies	
	Signed by responsible party of the proposed facility.	
	Two copies submitted to CDPHE.	
22.4(1)(b)	Engineering Report	
22.4(1)(b)(ii)	Proposed site location.	
	Evaluation alternatives.	
22.4(1)(b)(vi)	Proposed site adversely effected by floodplain etc.	
22.4(1)(b)(vii)	Soils Report stating that the site will support the facility.	
22.4(1)(b)(ix)	Legal control of the site for the project.	
22.4(1)(b)(xiii)	Implementation plans	
	Schedule including estimated construction time	
	Estimated start-up date.	

22.4(1)(c)	Notice of the intent to construct for private property.	
22.4(2)(a)	Review comments by the management agency if necessary	
22.4(2)(b)	Review comments by the county if necessary	
22.4(2)(c)	Review comments by the city or town if necessary	
22.4(2)(d)	Review comments by the local health authority.	
22.4(2)(e)	Review comments by the water quality planning agency	
22.4(2)(f)	State or federal agency review comments if necessary	
22.4(6)	A picture of the public notification sign posted at discharge.	

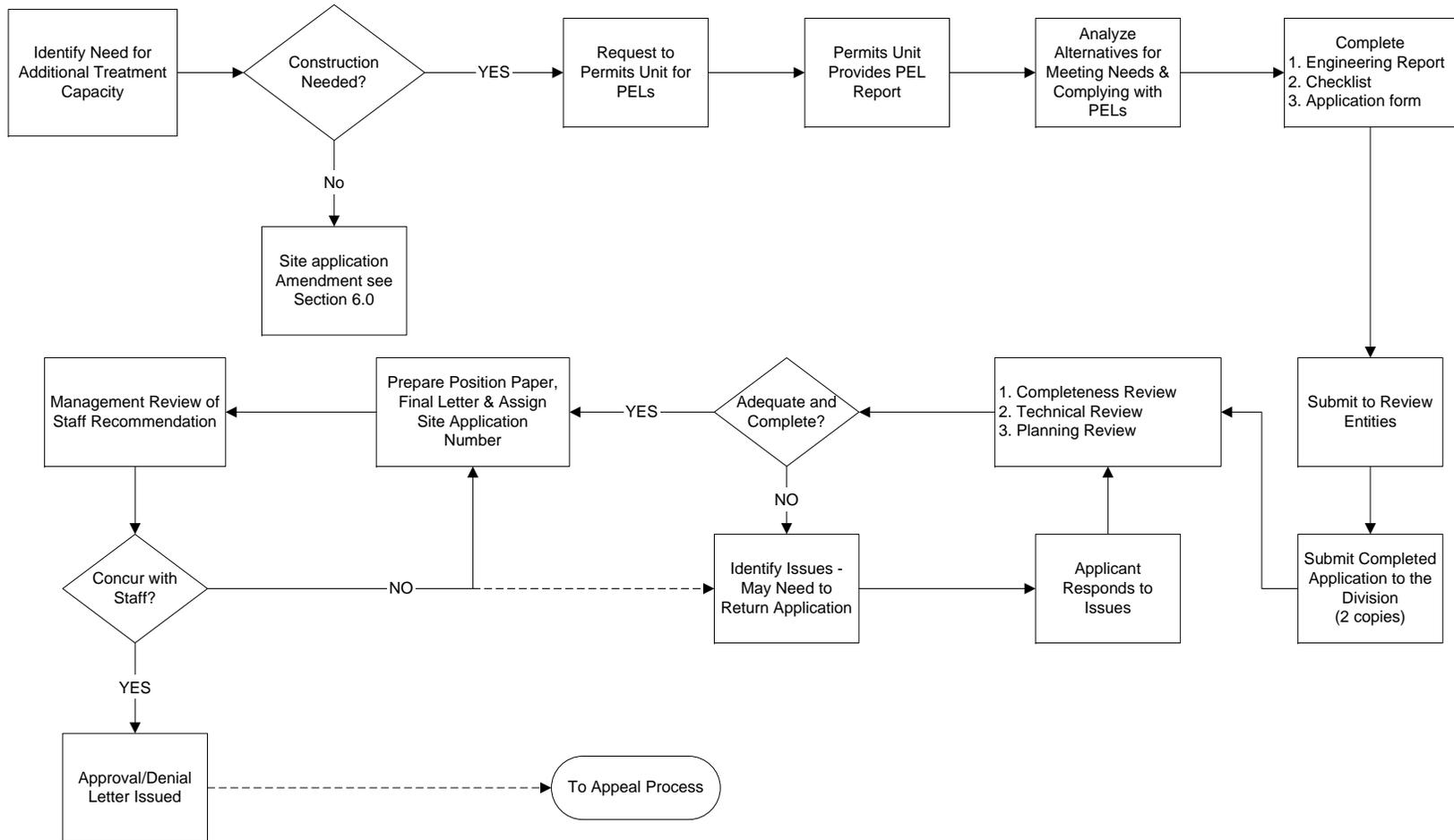
3.0 EXPANSION OF EXISTING DOMESTIC WASTEWATER TREATMENT WORKS

3.1 General Information and Flow Chart

This section provides guidance for the site application process for expansion of a domestic wastewater works at a previously approved site, except for lift stations and interceptors. Expanding lift stations and interceptors is covered in section 5.0, thus this section will typically apply to treatment plants. Expansion is defined as any construction that increases the design capacity of any facility used for treating, neutralizing, stabilizing, or disposing of domestic wastewater. An expansion involves increasing the hydraulic, organic, or other capacity limiting pollutant loading to the domestic wastewater treatment works. Expansion does not include in-kind replacement of existing facilities or equipment. If a proposed treatment process modification does not result in increased design capacity of the domestic wastewater treatment works, it is not an expansion and is not subject to the requirements of this part of the regulation. However, implementing the project may require amending the existing site approval. Please refer to section 6.0 regarding amendments. The proposal should be discussed with the District Engineer or Site Application Coordinator to determine the appropriate regulatory course of action.

Because the expansion is to take place at a previously approved site location, the submittal requirements are less comprehensive as compared to the submittal for a new domestic wastewater treatment works. However, the applicant may still be required to submit a soil report to determine the suitability of the site to accommodate the proposed structures. The applicant should check with the District Engineer early in the planning process to determine if a soils report will be required. A flow chart depicting the site application review process for expanding domestic wastewater treatment works is provided in Figure 5. Section 22.5 in Regulation No. 22 provides the specific requirements to obtain site location approval for expanding domestic wastewater treatment works.

Figure 5
 Site Application Review Process
 Expansion of Existing Treatment Works



3.2 Steps to be taken prior to submitting a Site Location Application For Expansion of an Existing Domestic Wastewater Treatment Works

3.2.1 Preliminary Planning

Preliminary planning is the first step to develop the technical and financial information needed for a site application including service area delineation and population, expected wastewater loading and flows, consolidation study with other facilities in the area, and a financial review. A consultant is often retained during the preliminary planning stage to provide technical information on wastewater treatment issues. A consulting engineer will also be necessary for many of the subsequent steps, e.g. preparing an engineering report describing the proposed wastewater treatment plant, analysis of the existing facilities within the service area, etc. The consulting engineer must be a Professional Engineer registered in the State of Colorado, and should be experienced in wastewater management issues.

It is also advisable to contact the Division to discuss the project and receive initial input. The applicant should discuss their plans with either the District Engineer for their area or the Site Application Coordinator. The Division has divided the state into a number of geographic areas, each assigned to a specific District Engineer. The County in which the project is to be located will determine which District Engineer to contact. This list of District Engineers by County is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

3.2.2 Preliminary Effluent Limits

The Division's development of Preliminary Effluent Limitations (PEL's) can be a critical step to complete a site application, and can take 60 days or more. A site application for an expansion to a treatment plant will typically require that PELs be developed if hydraulic capacity is being expanded (see regulation No. 22 Section 22.4(2)(b)(iii)). Check with the District Engineer or Site Application Coordinator to determine if PELs are necessary for the site application. It is important to submit a site application to the Division with complete PELs, if they are necessary.

A separate submittal to the Division is necessary to request PELs and this must be done in advance of evaluating treatment alternatives, developing the final report, and submitting the site application. The PELs will establish the performance goals for the expanded wastewater treatment facility. Developing the PELs requires assessing the potential impact of the discharge from the facility on the water quality in the receiving stream and/or ground water. For discharge to surface waters, the assessment is based on the upstream ambient water quality data and water quantity at low flow conditions in a given stream segment. Where there are other discharges proximate to the proposed discharge, the PEL process may need to also consider other dischargers to the stream.

If the receiving stream is habitat for threatened or endangered (T&E) aquatic species, the assessment may include further evaluation of the mixing zone. If the site location application is for treatment plants that provide treated effluent for 100% reuse, the assessment includes conformance with appropriate reuse standards or if no standards exist for the proposed type of reuse, considerations of public health exposure, and appropriate standards and/or associated control measures. The PEL application form is available online at <http://www.cdphe.state.co.us/wq/PermitsUnit/PolicyandGuidance/PELBrochure.pdf>

As can be seen by the above discussion, developing PELs is closely related to the permitting process and the Permits Unit within the Division carries out this task. Section 7.0 has been included in this guidance document to assist you with the PEL process.

3.2.3 The Engineering Report

The Engineering Report provides the information necessary for the Division to evaluate the applicant's proposed alternative and ability to manage and operate the facility over the life of the project. The engineering report includes

- a description of the project,
- brief description of the existing facility,
- service areas contributing flow to the facility,
- population study, flow and loading calculations both present and projected,
- PELs,
- soil investigations (if necessary), flood plain location, wetland areas, water rights impacts, and additional considerations may need to be identified in this report.

The report must include an implementation schedule with estimated construction time and an estimated start-up date.

3.2.4 Site Application Forms

Forms are available on the Water Quality Control Division's web site at www.cdphe.state.co.us/wq/tech/reg22/siteappforms/sa_form_hom.html or will be mailed upon request. The District Engineer or the Site Application Coordinator can assist you with selecting and filling out the appropriate site application form.

3.2.5 Filling Out the Completeness Checklist

The completeness checklist provides assurance that the site application is complete. Submitting a complete and adequate Site Application Package following the guidance provided herein is the best approach to assisting the Division to expeditiously complete its review.

3.2.6 Reviews by Other Agencies

Reviews by other Agencies are necessary prior to submitting the Site Application Package to the Division. The applicant will need to forward the Site Application Package (the completed forms, checklist and engineering report) to these other reviewing management agencies. The review agencies will review the Site Application Package in accordance with their policies and regulations, which may include the regional water quality management plan. The review agencies may recommend approval or denial of the project and offer comments based on local considerations. Stay involved in the process and following up with these agencies to provide any additional information they may require will help ensure that the Site Application Package is reviewed in a timely fashion.

3.3 Specific Guidance To Meet The Requirements Of Section 22.5 Of Regulation No. 22 For Expansion of Existing Domestic Wastewater Treatment Works

This section pertains to treatment facilities that are proposing increases in hydraulic or organic design capacity. If construction will increase capacity or loading to the domestic wastewater treatment works, site location and design approvals are required.

Section 22.5(1) Expansion of existing treatment works

The application for site location approval for any expanded domestic wastewater treatment works, except for interceptor sewers and lift stations as described in sections 22.6 and 22.7 shall be made to the Division on the proper form. Prior to submitting the form to the division, the application must be submitted to the local authorities and the 208 planning agency for review and comment in accordance with section 22.5(4). These forms are available from the Water Quality Control Division, 4300 Cherry Creek Drive South, Denver, Colorado, 80246-1530 and on the Division's web page.

Section 22.5 (2)(a) Service area

Typically, changes to the existing service area can lead to the need for an expansion of treatment capacity. These changes may include growth in the historical service area and areas that have been added to the service area. The site application submittal package should describe the existing and planned service area for the expanded facility including any new areas that are expected to be served with the expanded treatment capacity, even if those areas have not yet been formally incorporated into the service area. Population projections should reflect both changes to the service area, as described above, as well as revised census data and population projections as might have been generated by the State Demographers' Office and/or local planning efforts. Projections of future flows and loadings to the expanded treatment plant should incorporate the future population projections as well as any wastewater generation data derived from flows and loadings at the existing treatment plant.

Section 22.5 (2)(b) Preliminary Effluent Limitations

PELs are necessary to identify any changes in effluent limits resulting from a proposed increase in treatment capacity as well as to identify changes to effluent limits resulting from changes to ambient water quality, quantity or stream standards and classifications that have not yet been incorporated into the discharge permit for the subject facility. A new PELs analysis may be necessary even for facilities with a compliance schedule in their permit that includes projected effluent limitations. Please refer to Section 7.0 for additional information regarding PELs.

Section 22.5 (2)(c) Analysis of existing treatment works

The state of the existing treatment plant should be described in terms of the present loadings, both hydraulic and organic, for the peak month period. These values should be discussed in relationship to the previously approved (and permitted) hydraulic and organic design capacities and/or other limiting factor. Other flow values, such as peak day or peak hour may also be important if loadings during those time periods are causing operational limitations or are the reason for the proposed expansion. The performance of the existing treatment plant is most importantly reflected in terms of effluent quality and permit compliance. Thus, any problems in that regard, particularly permit violations, should be discussed in this section. Other factors, such as the need for continuous oversight or frequent maintenance may also be relevant to the performance of the facility and the proposed expansion even though permit conditions are being

met. The applicant can better consider alternatives, and the Division can better understand an applicant's proposal, if the loadings, capacities, and performance are discussed with respect to individual treatment unit components.

Section 22.5 (2)(d) Consolidation analysis

An analysis of alternatives for treating the additional loading, including consolidation, needs to be presented in a manner that clearly identifies the alternatives that have been considered and the criteria used to evaluate those alternatives.

The analysis of treatment alternatives does not dictate that a specific number of alternatives be considered. However, given the Division's legislative directive to "encourage consolidation wherever feasible," consolidation with existing or proposed wastewater treatment facilities does need to be discussed.

Alternatives for providing the appropriate capacity and degree of treatment, as described in the PELs, should be generated and the process by which the preferred treatment alternative was selected should be described. The selection criteria often include, but are not limited to, capital costs, projected operation and maintenance (O & M) costs, ease of operation, and flexibility for phased expansions. The issues related to expansion do differ somewhat from those related to the construction of a new facility.

The Division's consolidation policy (WQSA-5) should be evaluated when addressing the need for additional hydraulic and/or organic treatment capacity or other limiting factor. The applicant must evaluate the benefits of expanding individual treatment units, creating parallel treatment trains, adding different types of treatment, changing the type of treatment utilized, conveying the new, or perhaps all, flows to a different facility for treatment, or incorporating flows from other areas or facilities into the expanded facility. Many of the same factors that affect decisions regarding new treatment facilities, including short and long-term costs, site limitations, and ability to meet PELs, are important in the decisions related to expansions. Unlike the situation of proposing a new facility however, expansions must address the issues with respect to a site that has previously been selected, approved, and developed.

Section 22.5 (2)(e) Financial capability

The expansion of an existing treatment facility generally involves a significant capital expenditure. The expansion will enable the applicant to provide service to additional users yet the expense may fall, at least in part, on present users. Unless the applicant has built up sufficient reserves to pay for the proposed expansion, debt will be incurred and the applicant's financial system will need to account for repaying that debt, plus interest, and likely increases in operating and maintenance costs as well.

If the applicant intends to finance the project independently, these requirements can be met by providing evidence of such financial capability. This can take the form of written communication from a financial institution attesting to the applicant's possession of adequate capital to undertake the proposed project. In the event that a loan is to be utilized, a letter from the financial institution, bond adviser, or other loan program indicating its intent to make such a loan for the purpose of constructing the proposed wastewater treatment facilities can be provided.

Publicly financed facilities will address capital construction capabilities via other means. Available cash resources can be reflected by providing a copy of the current budget documents. Loans and/or grants can be documented via communication from the agency providing those funds or via elements of the state's revolving loan fund application, if applicable. The use of bonds is most frequently addressed by providing a copy of the report from the bond adviser or intended bond underwriter.

All applicants utilizing borrowed funds need to develop and present a financial plan for repaying those borrowed funds together with any fees and interest associated with the transaction. Such plan should address the full term of the payback period and not just demonstrate a pattern of anticipated revenue generation. The financial plan should identify such fee structure as is applicable to the retirement of capital costs associated with the infrastructure as well as any expansion/replacement fund. These may include plant investment fees and availability of service fees. Public entities in particular may include this information in budget documents and thus may be able to adequately address this element by providing current and projected budget documents.

All applicants charging fees for service need to present a financial plan for the continued operation and maintenance of the facilities. The annual and projected budgets should address the revenue generation and cost projection figures associated with this facility.

Any increases in the fee or rate structures that will be imposed to meet the additional financial obligations of the applicant should be described and incorporated into a table or budget projection demonstrating ability to meet those projected obligations. The budget should address construction, operation and maintenance, and replacement costs and can be provided as an attachment to the engineering report.

Section 22.5 (2)(f) Schedule

An implementation plan and schedule is the final element of the engineering report. This may be presented in the form of a time line (graph) or in narrative form. It must include, at a minimum, the estimated time to construct the proposed facilities, from the commencement of construction to start-up, and the projected start-up date. Additional information, such as projected site approval, design submittal, design approval, and bid award dates can assist the Division staff in visualizing the applicant's overall schedule but are not required.

In the event that the applicant is requesting approval of more than one construction phase in the approval, an implementation plan and schedule including estimated construction time, from start to completion, an estimated start-up date must be provided for each phase. If capacity needs are to be addressed through phased construction, that phasing must be shown in the approved Water Quality Management Plan and/or in appropriate local plans or engineering studies unless already approved through site location approval process.

Note: The construction time is measured in units of time, i.e. days, weeks, or months, while the estimated start-up date is a calendar related event, i.e. a month and year.

Section 22.5 (3) Soils Report

Though the expansion of an existing domestic wastewater treatment works does not generally warrant the submittal of a site specific analysis of geologic hazards and site suitability as is

required for new facilities, there are instances in which the Division may require such a report. The Division will consider this requirement if there is any evidence of soils or geologic conditions creating or contributing to problems at the existing treatment facilities or if the proposed expansion will place the facilities on a different part of the site where such geological analysis is warranted. The Division will also consider such a requirement if the expansion will involve significant changes to the treatment processes that will increase the structural loading on the soils. For expansions of treatment facilities that have not previously submitted a site specific soils and geologic report, the Division may also consider requiring such a report be prepared, particularly if problems have previously been noted or if significant increases in structural loading are likely to result.

Section 22.5 (4) Review by other agencies

The applicant's next step is submitting the Site Application Package that includes the application form and engineering report as described in Section 22.5(2) of Regulation No. 22 to the appropriate review agencies. The review agencies will evaluate the site application based on each agency's plans, policies, rules and regulations, which may include the regional wastewater management plan for the area if such a plan exists. The Division has developed the Utility Planning and Facility Siting Policy WQSA-1 regarding the site location application consistency with the water quality related elements of a local long-range comprehensive plan and wastewater management plan.

The applicant must perform all necessary coordination and supply all information to the review agencies. The applicant is responsible for obtaining all necessary signatures on the form before sending it to the Division. These agencies include but are not limited to appropriate local governments, county, city or town, local health authority, 208 planning agency, and other state or federal agencies if appropriate. The Colorado Municipal League (CML) publishes a directory of Municipal and County Officials in Colorado annually that contains contact information for many of the agencies listed above. The CML can be reached at (303) 831-6411 or www.cml.org. After receiving the site application the reviewing agencies have sixty (60) days to review and comment on the application and make a recommendation to the Division.

After the sixty (60) day period, if the applicant has not received comments or recommendation of approval from the reviewing agency the applicant may forward the application to the Division without such comments and/or recommendations. The Division will contact the reviewing agency and provide a period of seven (7) additional days for the agency to provide comments or recommendation or to explain the absence of such comments and/or recommendations.

SITE APPLICATION COMPLETENESS CHECKLIST

Expansion of an Existing Domestic Wastewater Treatment Works

Name of Project:

Applicant Name and Address:

Consultant Name and Address:

Type of Project:

Section	Elements	Please indicate where (document and page #) the submittal addresses the following
22.5(1)	Application submitted on proper form. Signatures from local authorities and planning agencies. Signed by responsible party of the proposed facility	
22.5(2)	Engineering Report	
22.5(2)(a)	Changes to existing service area and population Loading projections.	
22.5(2)(b)	PELs developed in coordination with the Division.	
22.5(2)(c)	Analysis of the of the existing treatment works.	
22.5(2)(d)	Analysis of alternatives Consolidation alternatives recommended	
22.5(2)(e)	Changes in the financial system	
22.5(2)(f)	Implementation plans and schedule. Estimated construction time Estimated date on which the plant will be in operation.	
22.5(3)	Soils Report stating that the site will support the facility.	
22.5(4)(a)	Review comments by the management agency if necessary	

22.5(4)(b)	Review comments by the county if necessary	
22.5(4)(c)	Review comments by the city or town if necessary	
22.5(4)(d)	Review comments by the local health authority.	
22.5(4)(e)	Review comments by the water quality planning agency.	

4.0 CERTIFICATION PROCEDURES FOR ELIGIBLE INTERCEPTOR SEWERS

This section applies to interceptors that are eligible for certification and do not need to obtain site approval. Certification is available if the treatment entity has adequate treatment capacity and the interceptor has sufficient capacity to carry the projected flows.

4.1 General Information and Flow chart

Interceptor sewers are defined as a sewer line with an internal pipe diameter equal to or greater than 24 inches, if it performs one or more of the following functions as its primary purpose:

1. Intercepts domestic wastewater from a final point in the collection system and conveys such waste directly to a treatment plant;
2. It is intended to replace an existing treatment plant and the transports the collected domestic wastewater to an adjoining collection system or interceptor sewer for treatment;
3. It transports the domestic wastes from one or more municipal collection systems to a regional treatment plant;
4. It is intended to intercept an existing major discharge of raw or inadequately treated wastewater for transport directly to another interceptor sewer or to a treatment plant.

A sewer with a minor number of building or lateral connections may be considered an interceptor sewer if it performs one or more of the functions listed above. Interceptor sewers are appurtenances to domestic wastewater treatment works. A flow chart depicting the certification process is shown in Figure 6.

Steps for submission of a Certification for Eligible Interceptor Sewers

4.2.1 Preliminary Planning

Preliminary planning for an interceptor sewer involves service area delineation, population projections (if necessary to estimate flows), and developing expected wastewater loading and flows.

4.2.2 Sewer Line Sizing

A Professional Engineer registered in the State of Colorado must determine the sizing of the sewer line. To be eligible for certification the proposed interceptor sewer must be capable of carrying the peak flow and projected total flows from the applicable service area. The entity must state that it is presently in construction, or will be in construction to provide sufficient capacity to treat projected flows from the new or expanded lift station or interceptor sewer prior to receiving such flows and loading.

4.2.3 Water Quality Management Plan

Check to ensure that the project is consistent with the Water Quality Management Plan. This is necessary for certification.

4.2.4 Treatment Entity Certification

The proposal must be discussed with the treatment entity to determine whether the entity will be able to certify that it has adequate treatment capacity, or has site location approval for sufficient additional capacity, to treat the projected total flow and loading from the interceptor and that the projected total flow and loading to their facility would still be under their discharge permit flow limitations, where applicable, after the interceptor sewer is completed. Obtain such certification from the treatment entity. This may be in the form of a letter.

4.2.5 Notify the 208 planning agency and the Division

Notify the 208 planning agency and the Division of the proposed interceptor sewer project at least 90 days prior to commencing construction. The notification can be in the form of a letter and must contain the following information:

- Name of entity constructing the interceptor sewer
- General location of the interceptor
- Brief description of the service area or map
- Projected interceptor sewer flow
- Name of treatment entity certifying treatment capacity

Attach the certification from the treatment entity and send the materials to the 208 planning agency, or the Division if a 208 planning agency does not exist.

4.2.6 Planning Agency Certification

Within 30 days of receiving notification with attached treatment entity certification, the 208 planning agency, or the Division if a planning agency does not exist, will certify if appropriate, that the interceptor sewer will have the capacity to carry the projected flow and is consistent with the Water Quality Management Plan.

4.2.8 Submit All the Materials

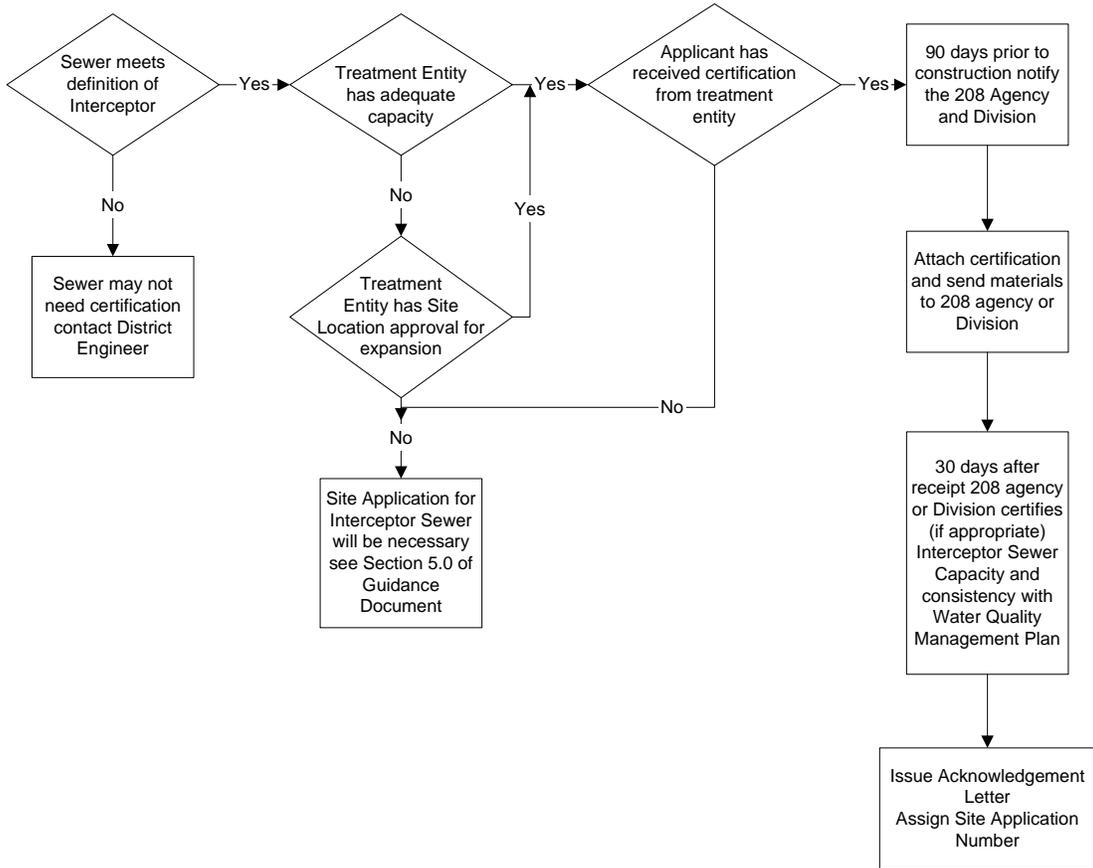
Submit all the materials: notification, treatment agency certification, and 208 planning agency certification (if applicable) to the Division.

4.2.7 Division Acknowledgement

After receiving the treatment entity certification and 208 planning agency certification submitted in accordance with section 22.6(2) of Regulation No. 22, the Division shall acknowledge in writing the receipt of such notification and certification.

Figure 6 depicts the certification process. In the event that the certifications from the treatment entity and 208 planning agency cannot be obtained, then site location approval is required in accordance with section 22.7 of Regulation No. 22. Guidance for that site application process is provided in section 5.0.

Figure 6
Certification of Eligible Interceptor
Sewers



5.0 INTERCEPTOR SEWERS NOT ELIGIBLE FOR CERTIFICATION AND LIFT STATIONS

This section applies to lift stations or those circumstances when an interceptor sewer is not eligible for certification.

5.1 General Information for Interceptors not Eligible for Certification and Flow Chart

Interceptor sewers are defined as a sewer line with an internal pipe diameter equal to or greater than 24 inches, if it performs one or more of the following functions as its primary purpose:

5. Intercepts domestic wastewater from a final point in the collection system and conveys such waste directly to a treatment plant;
6. It is intended to replace an existing treatment plant and the transports the collected domestic wastewater to an adjoining collection system or interceptor sewer for treatment;
7. It transports the domestic wastes from one or more municipal collection systems to a regional treatment plant;
8. It is intended to intercept an existing major discharge of raw or inadequately treated wastewater for transport directly to another interceptor sewer or to a treatment plant.

A sewer with a minor number of building or lateral connections may be considered an interceptor sewer if it performs one or more of the functions listed above. Interceptor sewers are appurtenances to domestic wastewater treatment works. A flow chart depicting the site application review process for interceptor sewers and lift stations is provided in Figure 7.

5.2 General Information for Lift Stations

Lift Stations, either new or expanding, require site approval. For lift stations expansion is defined as any construction that increases the hydraulic design capacity. Replacement of existing equipment while not increasing capacity and not changing the location of the lift station does not require site approval. An engineering report is required for lift stations that address the elements in section 22.7(1) of Regulation No 22. Written confirmation from the wastewater treatment entity to meet the requirements of section 22.7(1)(f)(i-iii), demonstrating legal control of the site, and posting the lift station site for public comment are necessary when submitting an application for site location approval. The force main is considered to be part of the lift station.

5.3 Steps to be taken prior to submitting a Site Location Application for Interceptor Sewers not eligible for certification and Lift Stations

5.3.1 Preliminary Planning

Preliminary Planning for a lift station involves service area delineation, population projections (if necessary to estimate flows), developing expected wastewater loading and flows, and planning for the financing of the construction. A consultant is often retained during the preliminary planning stage to provide technical information on lift station or interceptor issues. A consulting engineer will also be necessary for many of the subsequent steps, e.g. preparing an engineering report describing the proposed lift station or interceptor, analysis of the existing facilities within the service area, etc. The consulting engineer must be a Professional Engineer registered in the State of Colorado, and should be experienced in wastewater management issues.

It is also advisable to contact the Division to discuss the project and receive initial input. The applicant should discuss their plans with either the District Engineer for their area or the Site Application Coordinator. The Division has divided the state into a number of geographic areas, each assigned to a specific District Engineer. The County in which the project is to be located will determine which District Engineer to contact. This list of District Engineers by County is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>.

5.3.2 Preliminary Effluent Limits

No preliminary effluents limits are necessary for either an interceptor or lift station.

5.3.3 The Engineering Report

The Engineering Report provides the information necessary for the Division to evaluate the applicant's proposed alternative and ability to manage and operate the facility over the life of the project. The engineering report includes

- a description of the project,
- brief description of the existing facility (if any),
- service areas contributing flow to the facility,
- population study, flow and loading calculations both present and projected,
- information regarding the treatment of the wastewater pumped from the lift station.

5.3.4 Site Application Forms

Forms are available on the Water Quality Control Division's web site at www.cdphe.state.co.us/wq/tech/reg22/siteappforms/sa_form_hom.html or will be mailed upon request. The District Engineer or the Site Application Coordinator can assist you with selecting and filling out the appropriate site application form.

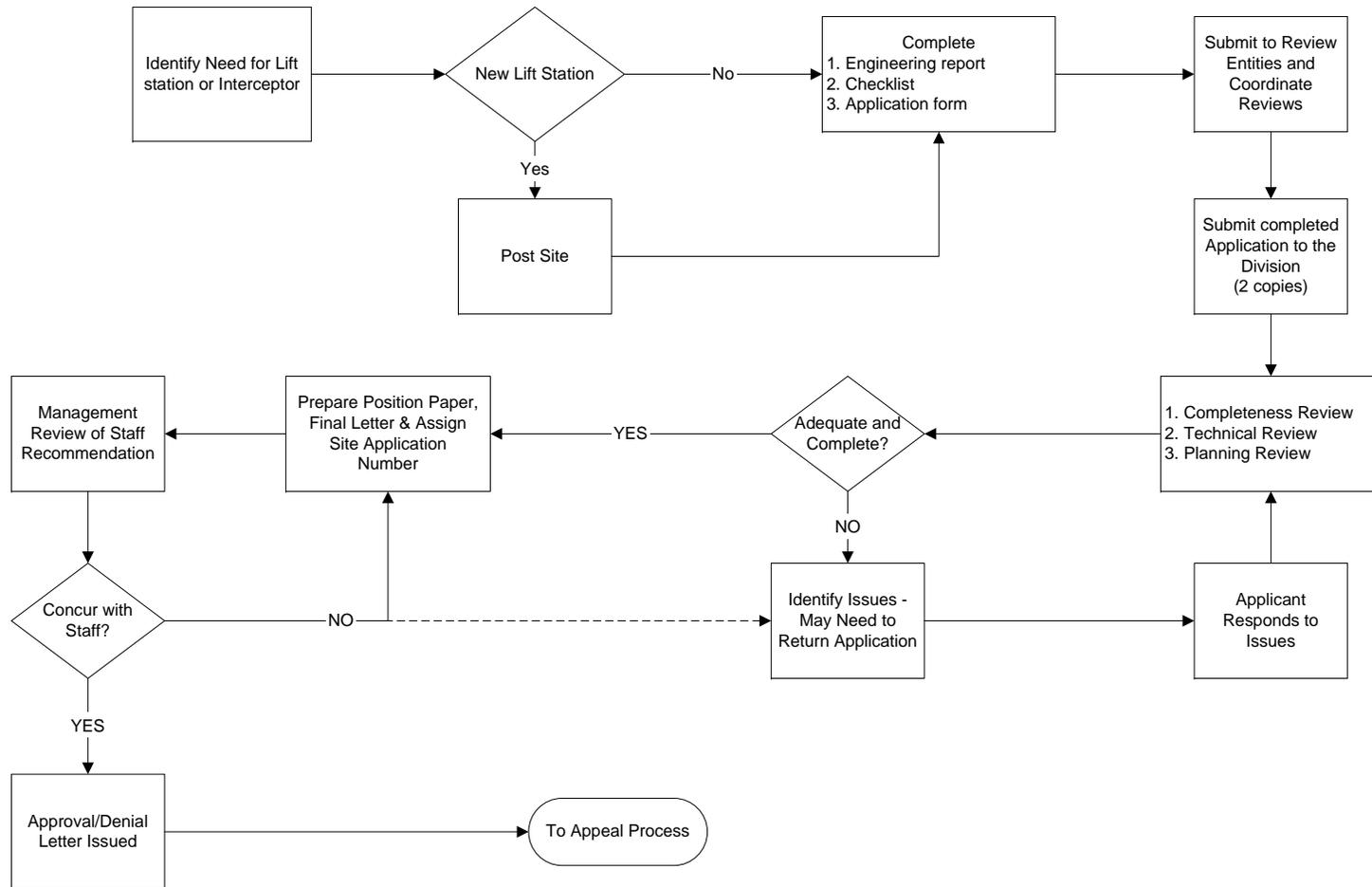
5.3.5 Filling Out the Completeness Checklist

The completeness checklist provides assurance that the site application is complete. Submitting a complete and adequate Site Application Package following the guidance provided herein is the best approach to assisting the Division to expeditiously complete its review.

5.3.6 Reviews by Other Agencies

Reviews by other Agencies are necessary prior to submitting the site application to the Division per Sections 22.7(2) and (3) of Regulation No. 22. The applicant will need to forward the Site Application Package (the completed forms, checklist and engineering report) to these other reviewing management agencies. The review agencies will review the Site Application Package in accordance with their policies and regulations, which may include the regional water quality management plan. The review agencies may recommend approval or denial of the project and offer comments based on local considerations. Staying involved in the process and following up with these agencies to provide any additional information they may require will help ensure that the Site Application Package is reviewed in a timely fashion.

Figure 7
Site Application Review Process for
Lift Stations & Non-eligible Interceptors Sewers



5.4 Specific Guidance To Meet The Requirements Of Section 22.7 Of Regulation No. 22 For Interceptor Sewers Not Eligible For Certification and Lift Stations

Section 22.7(1) Lift stations and ineligible interceptors

The application for site location approval for interceptors not eligible for certification as provided for in section 22.6 and all lift stations (new or expanding) shall be made to the Division on the proper form. Prior to submitting the form to the Division, the application must be submitted to the local authorities and the 208 planning agency for review and comment in accordance with sections 22.7(2) and 22.7(3). These forms are available from the Water Quality Control Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530 and on the Division's web page. The applicant shall also provide an adequate engineering report describing the proposed lift station and/or interceptor sewer.

Section 22.7 (1)(a) Applicant

While the name and address of the applicant is self explanatory, it bears repeating that the applicant is to be a person as defined in section 22.2 (21) of Regulation No. 22. Furthermore, the applicant is that person who is able to demonstrate control of the site for the life of the project and will assume the financial, management and operational responsibilities associated with the project. In some cases, a development company may be responsible for constructing the lift station and possibly even operating it for a period of time before the treatment entity takes possession of it and then operates it thereafter. In such cases the applicant will be the person constructing the lift station. The finalized arrangements regarding future ownership and operations should be included in the Site Application Package. Furthermore, the site application and design documents for the lift station must be provided to the future owner. The future owner will need to review the materials and communicate and resolve any issues it may have with the applicant. The Division's role will be to review the site application and design for conformance with Regulation No. 22 and the Design Criteria (Policy 96-1).

Section 22.7 (1)(b) Site location

The map, or maps, should be of sufficient size and scale for reviewers, who may not be familiar with the site and its surroundings to comprehend the information provided regarding the proposed location, topography, and neighboring land uses.

Section 22.7 (1)(c) Service area

The service area for the lift station or interceptor may be defined by means of a map, a legal description, or a narrative description of the properties to be served. Population projections for the service area should be presented for a 20-year period, or to build-out if less than 20 years. Similarly, flow loadings; based on the identified service area development and population projections, together with per capita wastewater generation data or assumptions, including industrial/commercial contributions, are to be generated for the 20-year (or to build-out) period.

Section 22.7 (1)(d) Treatment entity

The treatment entity responsible for receiving and treating the wastewater from the lift station or interceptor sewer is the owner and operator of the domestic wastewater treatment works to which the wastewater will be conveyed.

Section 22.7 (1)(e) Legal control of the site

The applicant may demonstrate control of the site via a number of options depending on the nature of that control mechanism. Applicants may demonstrate control of the site by providing copies of easements, deeds, or in situations where a public right-of-way (ROW) is to be used, a recent survey and proof that the right-of-way can be used is necessary. For lift stations, the best evidence is a copy of the deed or title to the property in the name of the applicant. In lieu of a deed, a copy of the title insurance may be provided, though the applicant must be sure that the title insurance document does not contain errors regarding ownership, property description, or limitations or restrictions that would preclude using the property for its intended purpose.

If the applicant is in the process of acquiring the property from the present owner, a copy of a purchase option or other written communication from the documented owner (including proof of that individual's ownership as described above) will suffice. The document(s) should indicate the intent to sell or otherwise convey control of the site to the applicant for the intended use or uses. Any limitations or restrictions such as access restrictions or term limitations should be disclosed. If the applicant intends to utilize their authority to condemn the site, a letter indicating the intent and ability to condemn, documentation of a condemnation filing or a written narrative in the engineering report documenting the authority to condemn the site and stating that it is the applicant's intent to condemn the site to gain control of it must be provided.

If the applicant controls but does not own the property, a lease or easement from the documented owner will be acceptable. However it should be clear, either through the lease, easement, documentation filing for condemnation, letter indicating the intent and ability to condemn, or otherwise in writing that the applicant has the authority to utilize the site for the purpose of constructing and maintaining the proposed domestic wastewater treatment works. Limitations that might affect the applicant's ability to construct or operate the proposed facilities for the life of those facilities or for the life of the structures/facilities to be served should be disclosed, i.e. holding a 20-year lease on a site proposed for a treatment works to serve private residences that will require service well beyond the 20-year period will need to be addressed.

Section 22.7 (1)(f) Treatment entity confirmation

This element requires a written response from the entity that owns and operates the domestic wastewater treatment works that will receive and treat the wastewater from the proposed lift station or interceptor sewer. This may not be done by another person or entity on behalf of the treatment entity. The response must address the following issues:

Section 22.7 (1)(f)(i) Provide treatment

The entity must state that it will accept the wastewater from the proposed lift station or interceptor sewer for treatment.

Section 22.7 (1)(f)(ii) Capacity statement

The entity must state that it is not presently receiving waste in excess of the approved and permitted hydraulic and/or organic design capacities. If the treatment entity is presently receiving waste in excess of the approved and permitted capacity, it must state that it is presently in construction, or will be in construction to provide sufficient capacity to treat projected flows from the new or expanded lift station or interceptor sewer prior to receiving such flows and loading. This approach must also include reference to the site location approval authorizing the construction of the expanded treatment plant capacity. The response must address flow and

loading projections to the treatment plant as well as identifying present and proposed treatment plant design capacities with respect to the treatment entity's plan to maintain adequate treatment capacity. In the event that the proposed lift station or interceptor sewer and its subject service area was envisioned and planned for as part of the treatment plant construction or expansion and discussion of that capacity was incorporated into the service area as described in a site location application related to the treatment plant, a discussion of, and reference to that application will suffice. If capacity needs are to be addressed through phased construction, that phasing must be shown in the approved Water Quality Management Plan and/or in appropriate local plans or engineering studies unless already approved through the site location approval process.

Section 22.7 (1)(f)(iii) Treatment entity compliance

The treatment entity must state that it is not presently in violation of any effluent limits contained in its discharge permit and has not been in such violation for the past two years nor is it operating under a Notice of Violation and/or Cease and Desist Order from the Division as a result of discharge permit violations. In the event that violations of the discharge permit have occurred or the entity is operating under a Division issued enforcement order, the treatment entity must describe those actions that have been taken or are proposed to achieve consistent compliance with terms and conditions of the discharge permit.

Section 22.7 (1)(g) Operations and maintenance

Evidence that the lift station or interceptor sewer will be adequately operated and maintained incorporates both financial and management elements. If the applicant is also the entity responsible for the operation of the wastewater treatment facility, this element may require no additional discussion or documentation unless changes to the financial system will result from the capital costs of the lift station or interceptor sewer and its operation and maintenance. If the applicant is not the wastewater treatment entity, then the entity that will construct and/or own the facility shall address issues, including financial issues associated with construction, operations and maintaining the proposed facilities. In these cases, documentation regarding financial planning should be incorporated into or provided in addition to the engineering report. The applicant shall also describe the applicant's capabilities to operate and maintain the proposed lift station or interceptor or, if the facility is to be conveyed to the collection system agency or treatment entity for ownership or for operation and maintenance purposes, a written agreement of the intent to make such transfer and of the treatment entity's intended acceptance of those facilities must be provided.

Section 22.7 (1)(h) Schedule

An implementation plan and schedule is the final element of the engineering report. This may be presented in the form of a time line (graph) or in narrative form. It must include, at a minimum, the estimated time to construct the proposed facilities from the commencement of construction to start-up, and the projected start-up date. Additional information, such as projected site approval, design submittal, design approval, and bid award dates can assist the Division staff in visualizing the applicant's overall schedule but are not necessary.

In the event that the applicant is requesting approval of more than one construction phase in the approval, an implementation plan and schedule including estimated construction time, from start to completion, and estimated start-up date must be provided for each phase.

Note: The construction time is measured in units of time, i.e. days, weeks, or months, while the estimated start-up date is a calendar related event, i.e. a month and year.

Section 22.7 (1)(i) Posting the site

In order to provide the public with an additional opportunity to provide input, the lift station site (for new lift stations) must be posted following the requirements listed in Section 22.4(3)(b) of Regulation No. 22 unless posted in accordance with local permitting requirements. The sign must be posted fifteen days prior to the time the site application is submitted to the Division. The Division should be notified of the posting of the sign and a photograph of the sign or other documentation certifying that this posting requirement has been met must be included in the Site Application Package. Site posting requirements do not apply for interceptor sewers.

Sections 22.7 (2) and (3) Review by other agencies

The applicant's next step is submitting the Site Application Package that includes the application and engineering report as described in Section 22.7(1) to the appropriate review agencies. The review agencies will evaluate the site application based on each agency's plans, policies, rules and regulations, which may include the regional wastewater management plan for the area. The Division has developed the Utility Planning and Facility Siting Policy WQSA-1 regarding the site application consistency with the water quality related elements of a local long-range comprehensive plan and wastewater management plan.

The applicant must perform all necessary coordination and supply all information to the review agencies. The applicant is responsible for obtaining all necessary signatures on the form before sending it to the Division. These agencies include the county, city or town in whose jurisdiction(s) the lift station and/or interceptor are to be located and the 208 planning agency. The Colorado Municipal League (CML) publishes a directory of Municipal and County Officials in Colorado annually that contains contact information for many of the agencies listed above. The CML can be reached at (303) 831-6411 or www.cml.org. After receiving the site location application the reviewing agencies have sixty (60) days in which to review and comment on the application and make a recommendation to the Division.

After the sixty (60) day period, if the applicant has not received comments or recommendation of approval from the reviewing agency the applicant may forward the application to the Division without such comments and/or recommendations. The Division will contact the reviewing agency and provide a period of seven (7) additional days for the agency to provide comments or recommendation or to explain the absence of such comments and/or recommendations.

SITE APPLICATION COMPLETENESS CHECKLIST

Interceptors Sewers Not Eligible for Certification and Lift Stations

Name of Project:

Applicant Name and Address:

Consultant Name and Address:

Type of Project:

Section	Elements	Please indicate where (document and page #) the submittal addresses the following
22.7(1)	Interceptor not eligible for certification or lift station.	
22.7(1)(a)	Name and address of applicant	
22.7(1)(b)	Map of facilities.	
	Topography.	
	Neighboring land uses.	
22.7(1)(c)	Service area, w/ existing and projected population.	
	Flow/loading calculations	
22.7(2)(d)	Treatment entity responsible for treating the wastewater	
22.7(1)(e)	Legal control of site or right-of-way for life of project.	
22.7(1)(f)(i)	Treatment entity will treat the wastewater	
22.7(1)(f)(ii)	Treatment entity is not in excess of its design capacity	
22.7(1)(f)(iii)	Treatment entity is not presently in violation	
22.7(1)(g)	Responsible person will operate and maintain facility	
22.7(1)(h)	Implementation plan and schedule	
22.7(1)(h)(i)	A picture of the Public Notice sign (new lift stations only).	
22.7(2)	Acceptance of plan by local planning agencies	
22.7(3)	Acceptance of plan by area water quality planning agency	

6.0 AMENDMENT OF AN EXISTING SITE LOCATION APPROVAL

6.1 General Information and Flow Chart

Amending a previous site location approval is a streamlined process compared to the site application process for a new site. This is based on the premise that the site will not be significantly altered and that the project is not likely to pose any significant additional off-site concerns. The proposed amendment must be copied to the appropriate review agencies but it is not necessary to obtain recommendations and signatures prior to submitting the amendment to the Division. The applicant is not required to provide copies to review agencies for changes in disinfection practice described in section 22.8(2)(b)(ii) of Regulation No. 22. For all other amendments the review agencies have 15 working days from receipt of the amendment application to review and comment directly to the Division unless a brief (less than 15 working days) extension is requested in writing. Applicants should notify the review agencies of the time allowed for reviews and where to send the amendment application comments i.e. directly to the Division.

For some types of amendments, such as the changes to disinfection practice covered in section 22.8(2)(b)(ii) the amendment application form can be submitted concurrently with the design documents and the Division will act on both submittals simultaneously. Section 22.8(2)(b) provides examples of treatment process modifications that the amendment process applies to and a process for addressing physical changes that are not covered by the list. Section 1.9 of this Document lists physical changes to existing treatment processes that can be made without amending the previous site location approval. A record of all decisions made by the Division regarding process changes that either require or do not require amending an existing site location approval are kept on the Division's website at <http://www.cdphe.state.co.us/wq/engineering/LatestNTVReport.pdf> as set forth in Policy WQSA-4.

There are two different types of site application amendments:

- Change from gas chlorination to liquid chlorination or from any form of chlorination to ultraviolet light disinfection as discussed in section 22.8(2)(b)(ii) of Regulation No. 22.

- All other treatment process additions, physical changes to treatment processes, adding or expanding treatment processes that generate reclaimed domestic wastewater, or changing the type of discharge employed. These types of changes are described in section 22.8(2)(a), 22.8(2)(b)(i), 22.8(2)(b)(iii to vi), and 22.8(2)(c) to (e) of Regulation No. 22.

The key difference between these types of amendments is that for minor disinfection changes, it is not required to provide copies of the amendment to review agencies. This simple amendment requires completing a one-page application form. This can be submitted concurrently with the design documents directly to the Division. The Division will review these documents simultaneously and the final decision letter will cover both the site application amendment and design. Thus, the amendment for these types of disinfection changes is essentially an administrative process. No further specific guidance for these types of amendments is necessary. A flow chart depicting the site application review process for amendments are provided in Figure 8.

6.2 Steps to be Taken Prior to Submitting a Site Application Amendment

6.2.1 Preliminary Planning

Preliminary Planning for an amendment involves determining the type of change being contemplated and the appropriate requirements in section 22.8 of Regulation No. 22. A consultant is often retained during the preliminary planning stage to provide technical information on wastewater treatment issues. A consulting engineer will also be necessary to complete any design work associated with the project. The consulting engineer must be a Professional Engineer registered in the State of Colorado, and should be experienced in wastewater management issues.

It is also advisable to contact the Division to discuss the project and receive initial input and evaluate whether a discharge permit amendment is necessary. The applicant should discuss their plans with either the District Engineer for their area or the Site Application Coordinator. The Division has divided the state into a number of geographic areas, each assigned to a specific District Engineer. The County in which the project is to be located will determine which District Engineer to contact. This list of District Engineers by County is available online at <http://www.cdphe.state.co.us/wq/engineering/ESDElist.pdf>

6.2.2 Preliminary Effluent Limits

The Division's development of Preliminary Effluent Limitations (PEL's) can be a critical step to complete a site application, and can take 60 days or more. Not all site application amendments require PELs. PELs may be required for the following:

- A change from other types of disinfection to chlorination – section 22.8(2)(b)(i)

- An increase in hydraulic capacity – section 22.8(2)(c)

- Changing from a surface water discharge to a groundwater discharge or vice-versa – section 22.8(2)(e)(i)

PELs would typically not be required for other types of amendments. Check with the District Engineer or Site Application Coordinator to determine if PELs are necessary for the site application amendment. It is important to submit a site application to the Division with complete PELs, if they are necessary.

A separate submittal to the Division is necessary to request PELs and this must be done in advance of evaluating treatment alternatives, developing the final report, and submitting the site application amendment. The PELs for the modified wastewater treatment works establish the Section 7.0 of this guidance document provides specific information regarding obtaining PELs.

6.2.3 The Engineering Report

The Engineering Report provides the information necessary for the Division to evaluate the applicant's proposed treatment processes and their ability to meet the permit limits or PELs. Engineering reports to support amendment applications may be very brief in some cases. If the project design is submitted with the amendment application, then the design report or process design report would likely provide the necessary information and a separate engineering report would not be needed. The engineering report includes:

- a description of the project,

- brief description of the existing facility,

- flow and loading calculations both present and projected,

PELs, if required

Other supporting technical information.

The report must include an implementation schedule with estimated construction time and an estimated start-up date.

6.2.4 Site Application Forms

Forms are available on the Water Quality Control Division's web site at www.cdphe.state.co.us/wq/tech/reg22/siteappforms/sa_form_hom.html or will be mailed upon request. The District Engineer or the Site Application Coordinator can assist you with selecting and filling out the appropriate site application form.

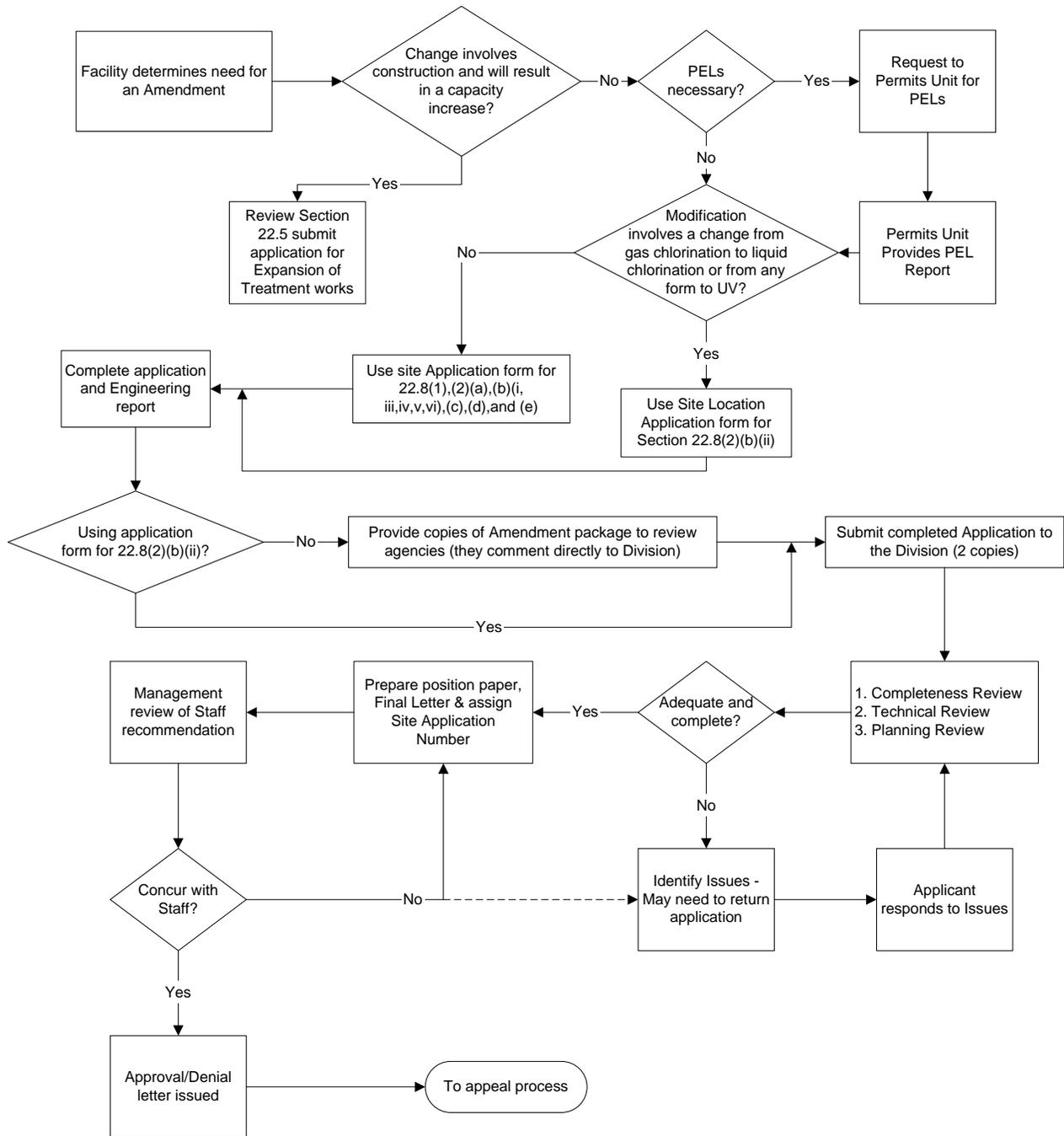
6.2.5 Submit a Complete and Adequate Site Application Amendment Package

Submit a Complete and Adequate Site Application Amendment Package following the guidance provided herein. A completeness checklist is not required for an amendment. However, please ensure that your package includes PELs, if required, and shows the date(s) that the package was copied to the applicable review agencies. Submitting a complete package assists the Division to expeditiously complete its review.

6.2.6 Provide Copies of the Site Application Package

Provide Copies of the Site Application Package (the completed forms, checklist and engineering report) to the appropriate review agencies. The review agencies will review the Site Application Package in accordance with their policies and regulations, which may include the regional water quality management plan. The review agencies may recommend approval or denial of the project and offer comments based on local considerations. These agencies include but are not limited to appropriate local governments, county, city or town, local health authority, 208 planning agency, and other state or federal agencies if appropriate. The Colorado Municipal League (CML) publishes a directory of Municipal and County Officials in Colorado annually that contains contact information for many of the agencies listed above. The CML can be reached at (303) 831-6411 or www.cml.org.

Figure 8
Amendment of an Existing Site Location Approval



6.3 Specific Guidance For Amendment of an Existing Site Location Approval

The application for amendment of an approved site application shall be made to the Division on the proper form with a list of the review agencies as defined in section 22.4(2) to whom the amendment proposal has been provided. These review agencies shall have 15 working days from receipt of the application to review and comment directly to the Division unless a brief (less than 15 working days) extension is requested in writing. The Division will not deem a lack of comments from such agencies within the specified comment period as a recommendation for denial during its consideration of the application. These forms are available from the Water Quality Control Division, 4300 Cherry Creek Drive south, Denver, Colorado, 80246-1530 and on the Division's web page. The applicant is not required to provide copies to review agencies for the types of disinfection modifications as described in section 22.8(2)(b)(ii). The applicant, in consultation with the Division, should also evaluate whether a discharge permit amendment is necessary and file the appropriate application with the Division if it is needed.

Section 22.8(2)(a) Adding a treatment process

The addition of a treatment process dealing with the liquid stream covered under this section may include, as an example, converting a digester into an equalization basin. Please ensure that the engineering report adequately describes the treatment process to be added, its expected performance and the expected impact on the operation and performance of the entire treatment plant.

Section 22.8(2)(b)(i), (iii), (iv), (v) and (vi) Physical changes to a treatment process

Examples of physical treatment plant changes are listed in this section of Regulation No. 22 with guidance for proceeding if the treatment plant modification is not listed. Please ensure that the engineering report adequately describes the physical changes to the treatment processes, their expected performance and any expected impacts on the operation and performance of the entire treatment plant.

Section 22.8(2)(c) Capacity re-rating

An increase or decrease of rated design capacity, as long as no construction takes place, is allowed under the amendment process. An increase in hydraulic capacity will require effluent limitations to be evaluated in coordination with the Division, and will likely necessitate that PELs be developed. For capacity increases the engineering report should adequately describe the original basis for design and demonstrate that the entire treatment plant, i.e. each unit process, is capable of treating the increased flow and/or loading.

Section 22.8(2)(d) Implementing reuse at an existing facility

The addition of or expansion of treatment processes to generate reclaimed domestic wastewater following secondary treatment at an existing treatment plant that has previously received site location and design approval can be processed via a site application amendment. Constructing a new reclaimed domestic wastewater treatment facility at a different site that has not previously been approved requires a site application for new domestic wastewater treatment works covered under section 2.0 herein. This also covers the change to the type of discharge employed for reuse. Phasing of the reuse project is allowed in accordance with section 22.3(12). Subsequent site approval amendments are not required as the phases of the reuse project are implemented within the approval period. Future site approval amendments are not required for adding reuse sites in accordance with the Reclaimed Domestic Wastewater Regulation (5 CCR 1002-84),

Regulation No. 84. Please ensure that the engineering report adequately describes the treatment processes that will be utilized to meet the applicable water quality requirements. For the types of reuse covered in Regulation No. 84, the water quality requirements are specified in that regulation. PELs developed in coordination with the Division will be necessary for reuse activities that are not covered by Regulation No. 84.

Section 22.8(2)(e) Change in the type of discharge

Where there is no change in the treatment process, the following changes in the type of discharge are allowed as an amendment to the existing site location approval: changing from surface water discharge to ground water discharge or groundwater to surface water discharge at the same approved site location, subject to appropriate preliminary effluent limitations; or a complete or partial change from a surface water or ground water discharge to wastewater reuse. For changes from surface water discharge to a groundwater discharge or vice-versa, please ensure that the engineering report adequately demonstrates that the existing treatment plant will be able to comply with the PELs. This could be accomplished by reviewing prior performance data, however it may be necessary to collect additional data.

7.0 PRELIMINARY EFFLUENT LIMITATIONS

Preliminary Effluent Limitations (PELs) are critical to the wastewater treatment facility planning process including site location approval, engineering design, and permitting for discharging effluent to state waters. The Engineering Report must address the viable treatment alternatives to attain the PEL's, and the selected appropriate alternative. The selected alternative must be able to meet the PELs, thus, undertaking significant alternatives analysis and/or design work is strongly discouraged prior to receiving PELs.

Regulation 61 requires that permit limitations be placed upon any discharged pollutant that has the reasonable potential to cause or contribute to an exceedance of water quality standards. The Division will determine whether pollutant concentrations in a discharge are such that the discharge has the "reasonable potential" to:

Cause or contribute to an in-stream exceedance of a water quality standard; or,

In the case of reviewable or outstanding waters, cause or contribute to an exceedance of the significant concentration threshold or impact current water quality.

PELs will be determined for pollutants expected to be present in the discharge and which may have "reasonable potential" to impact water quality. Discharges to state waters consist of discharges to groundwater or surface water. The technical considerations used to develop the PELs and the format of the PELs report are quite different depending on whether the discharge will be to groundwater or surface water.

Where a pollutant has the "reasonable potential" to degrade water quality in a reviewable stream (a stream that has not received a designated use) or any stream not designated as use protected, the Division will develop PELs using the Anti-degradation Significance Determination for New or Increased Water Quality Impacts guidance. In such cases, the PELs report will include both Water Quality Based Effluent Limits (WQBELs) and Anti-degradation Based Average Concentrations (ADBAC) as potential PELs. In the event that the ADBAC limits would be difficult to achieve for technical or financial reasons, the applicant must submit an anti-degradation alternatives analysis with the engineering report in the Site Application Package. Applicants should contact the District Engineer or Site Application Coordinator to receive specific guidance on how to conduct this analysis for their situation. In general, to support effluent limits higher than the ADBACs, the applicant must demonstrate that the water quality degradation is necessary to support important economic and/or social development and that the cost for treatment works capable of meeting the ADBACs is significantly greater than the cost of treatment works capable of meeting the WQBELs. The analysis must consider the technical feasibility of meeting the ADBACs as compared to meeting the WQBELs. Additionally, the analysis should include a cost comparison of at least three alternatives:

1. Cost of treatment works capable of meeting the ADBACs
2. Cost of treatment works capable of meeting the WQBELs
3. Cost of treatment works capable of meeting a less degrading alternative, i.e. limits that are between the ADBACs and the WQBELs.

It would be helpful in the discussion if the costs were presented in both capital and operating costs with the impact on user rates shown. A discussion of median household income in the service area compared to state average or other nearby locales can also be provided. A discussion of the net environmental benefit of meeting the anti-degradation limits should also be included. The Division will consider the alternatives analysis and determine the appropriate

preliminary effluent limits to be utilized for the remainder of the site location and design approval process. These PELs would then be included in the site approval letter and would be expected to be incorporated into the permit.

There are two methods an applicant can use to obtain PELs for their facility. First, the applicant can request that the Division prepare the PELs. Upon receipt of a request, the Division will issue an invoice to prepare the PELs. A fee schedule and form are available on line at <http://www.cdphe.state.co.us/wq/PermitsUnit/PolicyandGuidance/PELBrochure.pdf>. When payment has been received along with the necessary information to develop the PELs, the Division will begin to process the request. The PELs will be completed in 30 to 60 days, under normal work conditions. A longer time frame, i.e. beyond 60 days, may be required if there are considerations due to Threatened and Endangered (T&E) species designations for fish or aquatic life in the receiving stream or a newly proposed reuse method not covered by Regulation No. 84. If the applicant doesn't agree with the PELs initially developed by the Division, additional review of the models and the applicant's proposal may be necessary.

Second, the applicant may elect to have the PELs report for their facility developed by other professionals. The Division will review these third party PELs for consistency with the guidelines and requirements. If the PELs report is found to be deficient, it will be returned with comments for revision and re-submittal. This process also involves a fee payment.

The consultant will be able to assist with providing the information needed for PELs requests including the proposed wastewater flows or hydraulic capacity, expected pollutants in the discharge, and location of the treated water discharge point. This information, accompanied by a map indicating the point of discharge, along with a request for PELs should be sent to:

Colorado Department of Public Health and Environment
Water Quality Control Division
Permits Unit Manager
WQCD-PE-B2
4300 Cherry Creek Drive South
Denver CO 80246-1530

Any questions about PELs or the PEL process should be directed to the PEL Coordinator shown in Figure 2.

The PEL report will specify the effluent limitations that will be used to complete the planning and site application process. The PELs are expected to be the limits in the discharge permit; however, changes in water quality protection regulations, stream standards, completion of TMDLs, T&E species designations, known changes in stream flow data or ambient water quality, and/or nearby discharges may alter the assumptions used in development of the PELs and an update may be necessary. If site location approval has not been received within 18 months of the PELs report date, then the applicant should check with the PEL Coordinator to see if any changes are necessary. This can be accomplished by sending a brief letter to the above address. This concept also applies to a facility that has permit limits included in a compliance schedule within the permit, if the permit was issued 18 months ago or more.