Town of Scotia

Community Services District

Municipal Service Review

October 13, 2010

Prepared for Formation of the

Scotia Community Services District

Town of Scotia

Community Services District

Municipal Service Review

October 2010

LAFCO Membership 2010

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Executive Summary

Town of Scotia, LLC (TOS) has submitted a tentative map with Humboldt County to subdivide the existing, privately-owned town of Scotia and filed an application for the formation of a Community Services District (CSD). The Humboldt County Local Agency Formation Commission (LAFCo) reviews proposals for the formation of new local governmental agencies and changes of organization for all local agencies within Humboldt County. The Municipal Service Review (MSR) was prepared to document service capabilities for the proposed CSD.

Very little development is feasible within the proposed boundaries due to limited available vacant land, substandard lot sizes that cannot support additions, and physical constraints. Current industrial uses are expected to remain the same. TOS currently provides the majority of public services and utilities for the town of Scotia. There are no new proposed facilities or services. The only change is the service provider, from TOS to the proposed Scotia CSD. As part of the transfer of services and utilities to a new CSD, a detailed utility description of ownership has been prepared and repairs to existing infrastructure have been identified and are summarized in Table ES-1.

Table ES-1

Summary of Infrastructure Analysis

Scotia CSD Formation Municipal Service Review

Utilities and Services	Changes
Wastewater collection, treatment, and disposal	Responsibility for wastewater collection, treatment, and disposal services will be transferred to the Scotia CSD. The wastewater collection system will be improved through relocation of the residential/commercial lines to the new Scotia CSD public right-of-way, using 6-inch minimum diameter pipe; replacement of all service laterals using 4-inch minimum diameter pipe and the installation of service cleanouts; and installation of new manholes and cleanouts in residential and commercial areas. The wastewater treatment facility will be improved through relocation of the electrical controls outside flood elevation; installation of new drives on the primary clarifier, deep well pumps, shallow well pumps, and secondary clarifier; leveling the primary weir; replacing the shallow well pumps; addition of a solids contact basin or small activated sludge basin, and an additional secondary clarifier; and installation of return activated sludge pumps and blowers.
Water supply, storage, treatment, and distribution	Responsibility for water supply, storage, and treatment services will be transferred to the Scotia CSD. TOS will transfer the water right license to the Scotia CSD. The water distribution service will be improved through relocation of distribution lines to the public right-of-way, installation of all new services from the new distribution lines to residences with meters, and verification of serviceability or installation of new services and meters to commercial and industrial users. Raw and treated water storage tank foundations will be modified to meet current seismic

Table ES-1

Summary of Infrastructure Analysis

Scotia CSD Formation Municipal Service Review

Utilities and Services	Changes
	codes and standards. The water treatment facility will be improved through installation of two turbidity meters, upgrades to the chlorination system, and new system electronic controls. As part of a separate maintenance project, the fire suppression water tanks will be replaced.
Drainage and flood control	Responsibility for drainage and flood control services will be transferred to the Scotia CSD. The stormwater drainage system will be improved through replacement of immediately needed portions, and installation of new and replacement drain inlets and manholes in the residential and commercial areas, as deemed appropriate from a proposed drainage facilities plan and field-identified inspections. Flood protection will be improved through relocation of the Wastewater Treatment Facility (WWTF) electrical controls outside flood elevation.
Circulation	The road and street network will be improved through repairs that will include a 0.2-foot overlay of asphalt concrete pavement throughout streets affected by the utility infrastructure modification program; patching, leveling with appropriate base course thickness; some curb replacement in kind; repair to the retaining wall at south end of B Street; and safety improvements to address basic signage and stop bars. The County will continue to be responsible for maintaining B Street, Church Street, Eddy Street, Main Street, Mill Street, 1st Street, 2nd Street, 3rd Street, 4th Street, 5th Street, and 6th Street. The CSD will take over Bridge Street, North Court, and Williams Street, and will be responsible for all other streets and alleys.
Fire protection	The Scotia Volunteer Fire Department will be organized as part of the CSD. As part of a separate maintenance project, the fire suppression water tanks will be replaced. The fire apparatus and the personal gear will be upgraded.
Power	PG&E will incorporate existing power supply and distribution systems into its regional operation. TOS will continue to operate the cogeneration plant and sell the power to PG&E.
Parks and recreation	Responsibility for parks and recreation services will be transferred to the Scotia CSD. The Scotia Union School District will continue to operate the recreation center.
Law enforcement	No change. Law enforcement services will continue to be provided by the Humboldt County Sheriff.
Telecommunications	No change. Telecommunications will continue to be available from private providers AT&T and Suddenlink.

Table ES-1

Summary of Infrastructure Analysis

Scotia CSD Formation Municipal Service Review

Utilities and Services	Changes
Natural gas	No change. Natural gas will continue to be available from private provider PG&E.
Cable	No change. Cable services will continue to be available from private providers AT&T and Suddenlink.
Solid waste collection and disposal	No change. Solid waste services will continue to be available from private provider Eel River Disposal & Resource Recovery.

The range of services to be provided by the CSD includes water, wastewater, road maintenance and street lighting, stormwater drainage, parks and recreation, and fire protection. A financial analysis of expected revenues and expenditures was prepared in order to evaluate the CSD's ability to be self-sufficient.

The financial analysis lays out a plan analyzing the CSD's forecasted revenues and expenses. Operation of the CSD would be funded through a mix of property tax allocation (negotiated with Humboldt County) and user fees. Expenses would include personnel services, material and services, capital expenditures, and debt service. The capital improvement plan described above would be funded through a combination of short-term bonds and low-interest long-term loans or bonds. The expected tax revenue, user fees, and expenses were compared to those of other similar districts and cities providing comparable services:

- Tax revenues were estimated at various possible percentage rates (0%, 8.7122%, 15%) of the property taxes collected by the County in Scotia, representative of a CSD with the wide range of services that would be provided by the Scotia CSD. The final tax allocation factor (TAF) percentage will depend on negotiations with the County.

- User fees for all services and reserves were estimated in a range of $165.34 to $184.00/month by Year Five of the CSD's operation, which will vary relative in part to the tax allocation factors. Although it is difficult to find a suitable point of comparison for the entire user fees, due to the wider range of services than is typically provided by CSDs, the portion represented by water and wastewater services, estimated at up to $121.00 for the combined rates, is comparable to that found in similar districts and cities reviewed (range of $108 to $137, with an average of $118), and falls within the range considered affordable in U.S. Environmental Protection Agency (EPA) guidance for these services (range of $113 to $150).

- An initial budget primarily related to Operations and Maintenance (O&M) was prepared for each service area and a combined budget for overall operation of the CSD was projected over a five-year period to include the expected schedule of capital improvement projects. The CSD's projected operating budget will consist of

approximately $536,500 in annual costs for personnel services and $349,000 for materials and services.

- The short-term loan or bonds will be financed entirely by the current owner, TOS. Debt service for the long-term bonds would represent approximately $30.22/month by Year Five of the CSD's operation. This is comparable to the bond levies assessed under the Mello-Roos Community Facilities Act of 1978, which enables cities, counties, special districts, and school districts to establish community facilities districts and to levy special taxes to fund a wide variety of facilities and services.

The overall operating budget relative to services provided, including revenues and expenditures, is consistent with local area agencies and experienced operating costs of the community.

The financial analysis was intended to represent a "worst case" scenario. Although the CSD, as a public entity, would have access to sources of funding (such as, grants and low-interest loans from federal and state agencies), it would be speculative to assign a dollar value at this stage. Similarly, "pooled" bonds (Pooled Transaction Certificates of Participation) funding multi-agency projects offer more advantageous rates. This funding may be obtained through entities like the California Special Districts Association (CSDA) Finance Corporation as outlined in the financial analysis and obtaining them is not considered speculative, as it can be issued with certainty. While in practical application bonds as opposed to grants/loans are considered a fallback position, they were used as the primary option in the analysis to account for the maximum anticipated user fees.

Cost-avoidance, shared facilities, and management efficiencies opportunities are identified in this MSR, most prominently those realized by integrating the Scotia Volunteer Fire District (SVFD) into the CSD structure, followed by opportunities for joint planning and purchases with other local agencies. Local governance and accountability review indicates that the CSD will have the ability to make information available to the public and comply with the Brown Act. The CSD's proposed government will be simple and closely resemble that of other similar agencies in the County. A "status quo" sphere of influence is sustainable and appropriate for the Scotia CSD.

(Note: This MSR was updated in October 2010, based on material submitted to LAFCo staff in August and September, 2010, for final consideration by the LAFCo commission prior to adoption of resolutions for approval of the CSD.)

Table of Contents

Table of Contents, Continued

Table of Contents, Continued

Table of Contents, Continued

Appendices

List of Illustrations

Abbreviations and Acronyms

CCF	100 Cubic Feet
cfs	cubic feet per second
gpd	gallons per day
gpm	gallons per minute
kV	kiloVolt
MGD	Million Gallons per Day
NTU	Nephelometric Turbidity Units
AAF	Average Annual Flow
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AMHI	Annual Median Household Income
APN	Assessor's Parcel Number
AWWF	Average Wet Weather Flow
CalARP	California Accidental Release Prevention Program
CDF	California Department of Forestry and Fire Protection
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CPUC	California Public Utility Commission
CSD	Community Services District
CSDA	California Special Districts Association
DHS	California Department of Health Services
EDU	Equivalent Dwelling Unit
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
ESU	Equivalent Service Unit

Abbreviations and Acronyms, Continued

FEMA	Federal Emergency Management Agency
GC	California Government Code
HOA	Home Owners Association
HRC	Humboldt Redwood Company
I/I	Infiltration and Inflow
ISO	Insurance Services Office, Ltd.
LAFCo	Humboldt County Local Agency Formation Commission
LOS	Level of Service
Marathon	Marathon Structured Finance Fund
MMWWF-5	Maximum Month Wet Weather Flow
MRC	Mendocino Redwood Company
MS4	Municipal Separate Storm Sewer System
MSR	Municipal Service Review
NCEMSA	North Coast Emergency Medical Service Authority
NCRA	North Coast Railroad Authority
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
PALCO	Pacific Lumber Company
PEIR	Program Environmental Impact Report
PPC	Public Protection Classification
RAS	Return Activated Sludge
RWQCB	California Regional Water Quality Control Board, North Coast Region
SHN	SHN Consulting Engineers & Geologists, Inc.
SVFD	Scotia Volunteer Fire Department

Abbreviations and Acronyms, Continued

SWRCB	State Water Resource Control Board
TAB	Tax Assessment Board
TOS	Town of Scotia Company, LLC
USDA	U. S. Department of Agriculture
USGS	United States Geological Survey
VCP	Vitrified Clay Pipe
VFD	Variable Frequency Drive
WDR	Waste Discharge Requirement
WTF	Water Treatment Facility
WWTF	Wastewater Treatment Facility

Zoning Designations:

C-2/Q	Community Commercial, Qualified
IG	Industrial General
MH/Q	Heavy Industrial, Qualified
U	Unclassified

Combining Zone Classifications:

D	Design Control
N	Noise
P	Planned Development
Q	Garage Lots

Chapter 1. Introduction

1.1 Purpose of Municipal Service Review

1.1.1 Overview

The Humboldt County Local Agency Formation Commission (LAFCo) reviews proposals for the formation of new local governmental agencies and changes of organization for all local agencies within Humboldt County. In order for LAFCo to approve the formation of a new agency, information must first be collected that documents the service capabilities of that agency.

This Municipal Service Review (MSR) has been prepared pursuant to LAFCo Guidelines and Procedures, updated April 28, 2001 per AB 2838 and July 15, 2003 per AB 2227 to determine how urban services will be provided to the area upon formation of a Community Services District (CSD) for the existing, privately owned town of Scotia. (Note: This MSR was updated by LAFCo staff in October 2010 for final consideration by LAFCo prior to adoption of resolutions for approval.) This MSR identifies the current service providers, level of service, and transfer of service issues related to the provision of water, wastewater treatment, storm drainage, circulation, fire protection, electrical, parks and recreation, law enforcement, telecommunication, natural gas, cable, and solid waste for the town of Scotia.

1.1.2 Regulatory Context

The applicant has submitted a tentative map with Humboldt County to subdivide the Town of Scotia. An additional application has been filed with the LAFCo to form a CSD. A Notice of Preparation (NOP) was prepared and circulated by Humboldt County in compliance with the California Environmental Quality Act (CEQA) (State Clearinghouse # 2007052042). A Draft Program Environmental Impact Report (PEIR) was prepared by SHN Consulting Engineers & Geologists, Inc. (SHN) for the County on behalf of Town of Scotia, LLC (TOS), and circulated by the County for the required 45-day public review and comment period ending in January 2008. The Final PEIR was circulated and is scheduled for a Humboldt County Planning Commission hearing (SHN, 2009).

On November 10, 2009, the Humboldt County Board of Supervisors Certified the PEIR with Resolution No. 09-77 and approved Vesting Tentative Subdivision Map FMS 05-01, allowing for the subdivision of the Town of Scotia into 340 parcels. The County also approved General Plan Amendment GPA 05-01, Rezoning ZR 05-01, and Planned Development Permit PDP 05-01, corresponding to the proposed subdivision.

1.2 Scotia Setting

Scotia, which was originally known as Forestville, was founded in 1882 as part of the purchase of 6,000 acres of forested lands along the Eel River in Humboldt County, California (see Figure 1). The Pacific Lumber Company (PALCO) began its logging operations and building of the town shortly thereafter. Scotia was built around the logging industry, and residential units were constructed to house company employees.

Approximately 420 acres of land comprises the subdivision area of Scotia on Assessor's Parcels Number (APN) 205-351-016 and 205-351-018. From the 1880s to 2008, Scotia has operated as a company town, and it was one of the last company-owned and company-operated towns in the nation. The entire town of Scotia, including the buildings, houses, accessory structures, roadways, and community infrastructure, was developed and constructed by PALCO and continues to be maintained by TOS. The residences were constructed and maintained by PALCO for their employees. Under PALCO management, the town of Scotia retained a consistency in layout, streetscapes, and historic design, and presents a well-maintained appearance.

The town of Scotia is located in the Eel River Valley in southern Humboldt County, and is bordered to the east by Highway 101, and to the north, south, and west by the Eel River. Scotia's topography ranges from flat areas in the western and central portions of the town, to sloped terrain in the eastern portion toward Highway 101. Steep, forested hillsides and mountains surround the town and river. The City of Rio Dell is located just north, across the Eel River from Scotia.

1.2.1 Project Applicant and Property Ownership

On January 18, 2007, PALCO filed for protection under Chapter 11 of the U.S. Bankruptcy Code.

On July 8, 2008, the court issued its judgment and order confirming the Plan of Reorganization submitted by secured creditor Marathon Structured Finance Fund (Marathon), joined by Mendocino Redwood Company (MRC). Pursuant to that plan, most of the Town of Scotia's real and personal assets transferred to a reorganized entity wholly owned by Marathon, Town of Scotia Company, LLC, now the applicant and project proponent. Under the plan, the active Scotia sawmill facilities and other ancillary office buildings have transferred to a second reorganized entity, Humboldt Redwood Company (HRC) in which Marathon and MRC both have interests (United States Bankruptcy Court for the Southern District of Texas, Corpus Christi Division as "Case No. 07-20027-C-11" under the consolidated title, *In Re Scotia Development LLC, et al, Debtors*.)

As a matter of law and a consequence of the Judgment and Order confirming the Plan of Reorganization, on and after the effective date, July 30, 2008, Town of Scotia Company, LLC has full legal authority to operate the PALCO Scotia businesses; to use, acquire, and dispose of property; retain, compensate, and pay professionals or advisors; settle causes or claims; etc. without any additional approval or supervision by the bankruptcy court or any other agency or entity except as may be expressly provided in the Plan of Reorganization.

1.2.2 Existing Uses

Existing uses in Scotia include a mix of commercial, residential, industrial/timber production, public facilities (after the transfer of ownership to the CSD), and recreational, all of which are summarized below (See Figure 2).

Commercial. The approximately 13-acre commercial area is located in the northern portion of Scotia, bordering Main Street. Scotia's commercial center is currently zoned Community Commercial Qualified (C-2/Q). Commercial land uses include the U.S. Post Office, a shopping center, beauty/barber shop, movie theater, bank, hardware store, HRC and TOS offices, the Scotia Museum, Scotia Inn, and a number of park-

like landscaped setback areas. The former hospital, located just off Main Street, is used for medical offices and storage space (SHN, September 2007).

Residential. There are three residential areas in Scotia with 272 residential units that are currently zoned Unclassified (U). The smallest residential area, known as the North Court Neighborhood is approximately 6 acres, located in the northern corner, adjacent to the Highway 101 Scotia off-ramp. The mid-sized residential area, known as the Williams's Street Neighborhood is approximately 13 acres, located west of the log pond and adjacent to the river. The largest residential area, known as the "Primary Neighborhood" is approximately 40 acres, located south of the commercial center, east of the main industrial area, and is bordered by Highway 101 to the east (SHN, September 2007).

The Primary Neighborhood also contains non-residential land uses that are commonly located in residential areas, including an elementary school (although not within the purview of the LAFCo), two churches, commercial offices (in the former hospital building), and the recreation center. Also within this residential area—although considered part of the public facilities zone—is the fire station (SHN, September 2007).

Industrial. Approximately two-thirds of the town of Scotia is devoted to industrial uses. The industrial area, designated Industrial General (IG) in the Humboldt County General Plan and zoned Heavy Industrial/ Qualified (MH/Q), includes: Mill complexes "A" and B, a large remanufacturing plant, a cogeneration plant, fuel and machinery buildings, a planer facility, small and large log sawmills, the log pond, log storage areas, a hardwood chip plant, a sediment pond, and a transfer station (SHN, September 2007).

There is a second, smaller industrial area located west of the large remanufacturing plant complex's lumber storage area and adjacent to the Eel River. It includes a hardwood chip plant, log storage areas, a sediment pond, and transfer station (SHN, September 2007).

Public Facilities and Recreation. These areas are currently owned and operated by TOS; however, after the transfer of ownership to the CSD and rezoning, they will be public facilities. Public facilities located adjacent to the industrial area and river, include Fireman's Park, Carpenter's baseball field, the soccer field, and the Wastewater Treatment Facility (WWTF). The water treatment plant is located on the east side of Highway 101. The North Coast Railroad Authority (NCRA) right-of-way, which extends the entire length of Scotia, is also considered a public use (SHN, September 2007).

1.3 Framework of Analysis

In preparing the MSR, three requirements were key:

1) The need to provide **levels of service** that are sufficient to meet the forecasted needs of the population and are comparable to those that are currently provided and found in similar communities in the area.

2) The **affordability** of the resulting solutions in terms of fee structure, debt service, etc.

3) The necessity to meet all applicable **regulations.**

The existing services and utilities were analyzed in light of these factors, trying to use fairness and caution. None of the upgrades that are currently proposed preclude future options for the CSD to upgrade its facilities or respond to changing conditions or unforeseen changes in regulations. The CSD will remain able to opt for new or different upgrades, new facilities, joint services with other public entities, etc.

Level of Service: The appropriate level of service is that of an existing community with facilities showing normal wear and tear but a healthy life expectancy of at least 20 years. The level of service should be maintained throughout the service life, accounting for forecasted growth, and should be comparable to that of other similar communities in Humboldt County.

The CSD and taxpayers must not be burdened with under-par infrastructure or excessive maintenance requirements; on the other hand, the community of Scotia is an existing one and it would not be reasonable to require that Scotia's infrastructure be rebuilt to match the profile of a newly-built development.

Affordability: The future CSD and the taxpayers must not be saddled with excessive fees or debt service. As a private entity, TOS presently has no access to the funding sources available to a public entity, and a conservative approach was used in the financial analysis underpinning the MSR.

Once established, the CSD will able to pursue such funding, but prudence was used in the financial planning to avoid presenting an excessively optimistic analysis. As a public entity, the future CSD will retain the ability to make more sweeping decisions if deemed appropriate.

Regulatory Requirements: SHN and TOS looked ahead in terms of capacity to meet current regulations as well as reasonably foreseeable changes in regulations for the short- to medium-term. This MSR and the Detailed Engineering Analysis (Appendix A) that supports it plan for upgrades that will allow the infrastructure to accommodate Scotia's growth needs for the next two decades under current and reasonably foreseeable regulations.

However, regulatory requirements can change with every re-issue of a permit (for example, the National Pollutant Discharge Elimination System [NPDES] and Waste Discharge Requirement [WDR] permits). It would not be reasonable to require that the facility upgrades be planned for every possible change in regulations.

1.4 Elements of the Municipal Service Review

As part of its review of municipal services, the LAFCo is required to prepare a written statement of its determination with respect to each of the following (Governor's Office of Planning and Research, 2003):

1) infrastructure needs or deficiencies,

2) growth and population projections for the affected area,

3) financing constraints and opportunities,

4) cost avoidance opportunities,

5) opportunities for rate restructuring,

6) opportunities for shared facilities,

7) government structure options, including advantages and disadvantages of consolidation or reorganization of service providers,

8) evaluation of management efficiencies, and

9) local accountability and governance.

In addition, California Government Code (GC) Section 56425 requires that the LAFCo evaluate the sphere of influence of each local governmental agency within the county.

In order to present the project-specific information in a logically unfolding sequence, the information in this MSR was arranged as follows:

Chapter 1: Introduction

Chapter 2: Growth and Population (Element No. 2)

Chapter 3: Infrastructure Analysis (Element No. 1)

Chapter 4: Finances and Rate Structure (Elements Nos. 3 and 5)

Chapter 5: Cost Avoidance Opportunities and Shared Facilities (Elements Nos. 4 and 6)

Chapter 6: Evaluation of Management Efficiencies (Element No. 8)

Chapter 7: Local Governance and Accountability (Element No. 9)

Chapter 8: Government Structure (Element No. 7)

Chapter 9: Sphere of Influence

Chapter 10: References

Chapter 2. Growth and Population

2.1 Current Population

As of January 2009, the TOS housing office estimates that there are 272 residential dwelling units in Scotia, with an estimated residential population of approximately 860 persons; TOS employs 67 people, including those who work at the Scotia Inn; with an estimated 88 additional employees working for other businesses in Scotia (Frank Bacik, personal communication). Based on the U.S. Census, and using census blocks that are approximately coterminous with the town, the year 2000 population was 849 (Tract 06023- 011100 and blocks 4 through 7, 10 through 25, 27 through 33, and 38) (SHN, September 2007).

2.2 Future Population Growth

Scotia is an unincorporated community and is located within the jurisdiction of Humboldt County with regard to land use regulations. The town's existing uses are not identified in the current General Plan land use designations and zones. However, the proposed Humboldt County General Plan Amendment and Rezone will reflect current land uses in Scotia that have been occurring for the last 100 years (see the PEIR for more detailed information). After the subdivision and sale of lots, there will be five vacant parcels. These parcels comprise the only non-developed areas in Scotia.

Scotia does not have a current community plan. As part of the ongoing Humboldt County General Plan update process, it is anticipated that the County and CSD will collaborate on the preparation of a community plan for Scotia when the CSD is formed. For more detailed information, see the PEIR.

There is limited land available for development within the proposed CSD boundaries. The vast majority of parcels are "substandard" when compared to County Zoning requirements for Residential One-Family zone, especially regarding lot sizes, yard, and maximum ground coverage requirements, thus the necessity of the Planned Development (P) combining zone. The P combining zone allows these non-conforming lots to be created because the town was developed prior to the zoning code being adopted. In essence, with the P overlay, existing non-conforming standards become the standards for each individual lot. However, County code does not allow a lot that does not comply with the code to change in a way that further exacerbates non-compliance. Simply, there is not adequate space for most residential zone lots to accommodate secondary dwelling units. Of the existing residential lots, only 11 conform to current zoning requirements. Of those 11, only 5 have adequate size or yard dimensions or maximum lot coverage to accommodate secondary dwelling units. At this time, it is speculative to say that the vacant residential lots would support second dwellings, because it would depend on the extent of site development.

The industrial areas of the town zoned MH/Q will be used by HRC as it continues to harvest timber and produce lumber at the Scotia mill. Essentially, areas used for outdoor lumber storage and the sedimentation pond will continue to be used as part of the lumber mill operations, are not considered vacant, and so will not be available for development. No plans exist to change from lumber production to some other industrial use in the foreseeable future. The subdivision and formation of a CSD will not result in changes to this existing condition.

There are physical restraints to development outside of the proposed boundaries. The town of Scotia is located adjacent to the City of Rio Dell. The Eagle Prairie Bridge (State Route 283) links Rio Dell and Scotia. Scotia is bound to the east by Highway 101 and to the north, south, and west by the Eel River. Scotia's topography ranges from flat areas in the west and central parts of the town, to sloped terrain in the eastern portion toward Highway 101. Steep, forested hillsides and mountains surround the town and river. There is no useable land available in the immediate vicinity of Scotia for development.

2.3 Determination

There is limited population growth in Scotia due to available vacant land, substandard lot sizes that cannot support additions, and physical constraints. Current industrial uses are expected to remain the same, and log storage areas and the sedimentation pond will continue to be used. Engineering studies have concluded that the existing WWTF historically handled wastewater flows and loads substantially greater than those that will exist after completion of the collection system upgrades proposed as part of the project. The WWTF is expected to have sufficient capacity to serve the newly created residential and commercial lots (SHN, November 2007).

The subdivision and formation of a CSD will not result in a need to increase capacity of the WWTF and there is an adequate water supply to sustain ongoing and future industrial operations.

Chapter 3. Infrastructure Analysis

TOS currently provides the majority of public services and utilities for the town of Scotia. There are no new proposed facilities or services. The only change is the service provider, from TOS to the proposed Scotia CSD. As part of the transfer of services and utilities to a new CSD, a detailed utility description has been prepared and repairs to existing infrastructure have been identified (see Detailed Engineering Analysis in Appendix A); and a schedule for these repairs has been developed (see Appendix B).

The proposed infrastructure improvements are in line with comparable system needs for a town similar in size and character to Scotia. Table 3-1 presents a quick overview, and the rest of this section provides analyses of each service to be provided to the CSD area. A more comprehensive analysis of the infrastructure upgrades is provided in the Detailed Engineering Analysis (Appendix A).

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Utilities and Services	Changes
Wastewater collection, treatment, and disposal	Responsibility for wastewater collection, treatment, and disposal services will be transferred to the Scotia CSD[1]. The wastewater collection system will be improved through relocation of the residential/commercial lines to the new Scotia CSD public right-of-way, using 6-inch minimum diameter pipe; replacement of all service laterals using 4-inch minimum diameter pipe and the installation of service cleanouts; and installation of new manholes and cleanouts in residential and commercial areas. The wastewater treatment facility will be improved through relocation of the electrical controls outside flood elevation; installation of new drives on the primary clarifier, deep well pumps, shallow well pumps, and secondary clarifier; leveling the primary weir; replacing the shallow well pumps; addition of a solids contact basin or small activated sludge basin, and an additional secondary clarifier; and installation of return activated sludge pumps and blowers.
Water supply, storage, treatment, and distribution	Responsibility for water supply, storage, and treatment services will be transferred to the Scotia CSD. TOS[2] will transfer the water right license to the Scotia CSD. The water distribution service will be improved through relocation of distribution lines to the public right-of-way, installation of all new services from the new distribution lines to residences with meters, and verification of serviceability or installation of new services and meters to commercial and industrial users. Raw and treated water storage tank foundations will be modified to meet current seismic codes and standards. The water treatment facility will be improved through installation of two turbidity meters, upgrades to the chlorination system, and new system electronic controls.

Table 3-1

Summary of Infrastructure Analysis

Scotia CSD Formation Municipal Service Review

Utilities and Services	Changes
	As part of a separate maintenance project, the fire suppression water tanks will be replaced.
Drainage and flood control	Responsibility for drainage and flood control services will be transferred to the Scotia CSD. The stormwater drainage system will be improved through replacement of immediately needed portions, and installation of new and replacement drain inlets and manholes in the residential and commercial areas, as deemed appropriate from a proposed drainage facilities plan and field-identified inspections. Flood protection will be improved through relocation of the WWTF[3] electrical controls outside flood elevation.
Circulation	The road and street network will be improved through repairs which will include 0.2-foot overlay of asphalt concrete pavement throughout streets affected by the utility infrastructure modification program; patching, leveling with appropriate base course thickness; some curb replacement in kind; repair to the retaining wall at south end of B Street; and safety improvements to address basic signage and stop bars. The County will continue to be responsible for maintaining B Street, Church Street, Eddy Street, Main Street, Mill Street, 1st Street, 2nd Street, 3rd Street, 4th Street, 5th Street, and 6th Street. The CSD will take over Bridge Street, North Court, and Williams Street, and will be responsible for all other streets and alleys.
Fire protection	The Scotia Volunteer Fire Department will be organized as part of the CSD. As part of a separate maintenance project, the fire suppression water tanks will be replaced. The fire apparatus and the personal gear will be upgraded.
Power	PG&E will incorporate existing power supply and distribution systems into its regional operation. TOS will continue to operate the cogeneration plant and sell the power to PG&E.
Parks and recreation	Responsibility for parks and recreation services will be transferred to the Scotia CSD. The Scotia Union School District will continue to operate the recreation center.
Law enforcement	No change. Law enforcement services will continue to be provided by the Humboldt County Sheriff.
Telecommunications	No change. Telecommunications will continue to be available from private providers AT&T and Suddenlink.
Natural gas	No change. Natural gas will continue to be available from private provider PG&E.

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Summary of Infrastructure Analysis

Scotia CSD Formation Municipal Service Review

Utilities and Services	Changes
Cable	No change. Cable services will continue to be available from private providers AT&T and Suddenlink.
Solid waste collection and disposal	No change. Solid waste services will continue to be available from private provider Eel River Disposal & Resource Recovery.

1. CSD: Community Services District
2. TOS: Town of Scotia, LLC
3. WWTF: Wastewater Treatment Facility

3.1 Wastewater Collection, Treatment and Disposal

3.1.1 Existing Level of Service and Improvements

TOS maintains and operates Scotia's wastewater collection, treatment, and disposal system, which are proposed to be acquired and operated by the CSD.

1) Collection System

The wastewater collection system, including portions of system pipelines, service laterals, manholes, and cleanouts, was constructed approximately 50 to 70 years ago (or more) to service a company-owned town. To that end, many collection lines, service laterals, and manholes are located under buildings, in residential yards, and are experiencing high Inflow and Infiltration (I/I) during storm events. Additionally, the pipe materials are primarily Vitrified Clay Pipe (VCP), in various states of serviceable hydraulic capacity.

Given the condition of the existing collection system as determined through inspection processes and the fact that much of the system is located outside of typical right-of-way areas (in backyards, under buildings, etc.—places that will become private property), a majority of the system needs to be replaced. A preliminary layout of a replacement system has been devised. Pending final design, some lines may need to be realigned from the proposed alignments shown on Figure 1-2 of the Detailed Engineering Analysis (Appendix A) in order to maintain gravity flow within the wastewater collection system.

The repairs to the wastewater collection system would include the following tasks:

- The residential/commercial collection system will be relocated and constructed using 6-inch minimum diameter pipe.
- All service laterals will be replaced using a 4-inch minimum diameter pipe to each building and will include a service cleanout.

- New manholes and cleanouts will be installed in the residential and commercial areas. HRC will be responsible for the repair of existing manholes on the industrial property.

These upgrades to the system are intended to significantly reduce I/I, thus reducing non-wastewater flows (stormwater primarily during the winter months) to the WWTF.

A detailed breakdown of proposed repairs is provided in Chapter 1 of the Detailed Engineering Analysis (Appendix A).

2) Wastewater Treatment

The Scotia WWTF is located on Williams Street, west of the main industrial area, north of the soccer field, and within the 100-year floodplain of the Eel River. The WWTF was constructed in 1954 and consists of the treatment headworks, a primary clarifier, a redwood slat trickling filter, a secondary clarifier, a sludge digester, a chlorine contact basin, a series of three treatment ponds, and a final summer percolation discharge pond (summer) or permitted Eel River discharge (fall, winter, spring).

The treatment plant process has an estimated existing hydraulic capacity of approximately 1.0 Million Gallons per Day (MGD). The Average Annual Flow (AAF) of wastewater treated is estimated at 0.240 MGD, with an Average Wet Weather Flow (AWWF) of 0.288 MGD and a Maximum Month Wet Weather Flow (MMWWF-5) of 0.420 MGD (Detailed Engineering Analysis Table 2-6, Appendix A).

The wastewater treatment system is operated by licensed operators. The WWTF has a State-regulated quantity of chlorine gas (4,400 pounds), which must also be managed according to the California Accidental Release Prevention Program (CalARP) Risk Management Plan. The proposed repairs to the existing WWTF incorporate upgrades to minimize the risk of the facility's location within the 100-year floodplain, provide redundancy for major treatment processes, and increase the secondary treatment capacity. A layout of the existing WWTF is shown in Figure 2-1 of the Detailed Engineering Analysis (Appendix A).

The existing WWTF is now operating under a new NPDES permit, and to date has met its permit conditions. In addition, an existing Cease and Desist Order for the WWTF sets forth a compliance schedule to develop and implement a pollution prevention plan (California Regional Water Quality Control Board North Coast Region [RWQCB], September 20, 2006).

The wastewater treatment system must provide reliable secondary treatment for at least the next 20 years. To achieve satisfactory performance within this timeframe, it will be necessary to upgrade or replace major components of the existing treatment system. These upgrades are summarized below:

A) Electrical Controls

The electrical controls will be relocated to a new elevated control room, above the 100-year flood elevation. The control room will contain the Variable Frequency Drive units (VFDs) for pump motors and a new electrical control panel.

B) Primary Treatment

Primary treatment consists of a primary clarifier and associated deep well pumps. Deep well pumps were replaced in 2007. Recommended upgrades to the primary treatment system include:

- replacing the primary clarifier drive,
- installing VFDs on deep well pumps, and
- leveling the top of the primary weir.

C) Secondary Treatment

With the installation of VFD motors on the shallow well pumps, the recirculation rate can be increased and the filter can be loaded at higher rates. Using the VFDs, it is estimated that the existing trickling filter will have the capacity to treat projected loadings.

Recommended improvements to the secondary treatment system include:

- Replacement of shallow well pumps with submersible pumps not impacted by flooding
- Installation of VFDs on the shallow well pumps
- Construction of a solids contact or small activated sludge basin following the trickling filter to operate as a combined suspended growth/trickling filter process
- Installation of Return Activated Sludge (RAS) pumps to transfer solids from secondary clarifiers to the solids contact basin
- Installation of blowers for the solids contact process with controls installed in the proposed control room
- New drive for existing secondary clarifier and horizontal baffling to increase settling
- Construction of an additional secondary clarifier to provide redundancy and improve treatment performance during peak flow events

D) Biosolids

The digester has the capacity to handle projected loadings; however, structural improvements will be necessary. Although the extent of these improvements will be assessed during design, an estimate of probable cost has been included in the upgrade costs.

The tertiary ponds are full of biosolids. The cost of initial and periodic removal biosolids from the tertiary ponds was included in the financial analysis as part of Operations and Maintenance (O&M).

Discussions with TOS have indicated that land application of dewatered biosolids is the preferred alternative for biosolids disposal. During dry weather, biosolids would be applied from the proposed drying beds onto forested land. In addition, upgrade costs include new covered drying beds with a drainage system that discharges into the influent sanitary sewer and a truck to dispose of biosolids.

3) Wastewater Disposal

During high winter flows, treated effluent is discharged directly into the Eel River. During the summer months, when discharges to the Eel River are prohibited, the percolation pond is used for disposal of treated effluent. The pond is a temporary construction and used only in the summer (May-October), to percolate treated wastewater from the WWTF. The Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, the Clean Water Act Section 401 Water Quality Certification from the RWQCB, and the California Department of Fish and Game Code Section 1603 agreement allow for the construction of the temporary percolation pond, which is annually removed by TOS.

Wastewater discharges from the Scotia Mill and Town of Scotia are currently covered under Waste Discharge Requirements Order No. 2006-0020, NPDES Permit No. CA0006017. These waste discharge requirements are associated with wastewater discharges from the industrial operations at the Scotia Mill and the existing WWTF, and do not cover stormwater discharges from the HRC Scotia Mill operations or the town of Scotia, which are discussed in more detail under section 3.3 of this MSR. The NPDES permit authorizes the WWTF to discharge treated wastewater from Scotia municipal waste treatment facility and 1.0 MGD from the Scotia steam electric power plant (including approximately 0.86 MGD of once-through cooling water).

Wastewater disposal alternatives are being investigated under a separate NPDES program with the RWQCB. TOS is planning for summer wastewater disposal by means of storage and evaporation from the existing log pond.

3.1.2 Scotia Level of Service with Improvements

Wastewater systems are currently operated by CSDs in several unincorporated communities in Humboldt County, including McKinleyville, Redway, and Shelter Cove.

According to the PEIR, the formation of a CSD for Scotia would provide an organizational structure to operate and maintain the wastewater facilities while the subdivision would create individual lots for existing dwellings or structures and other related facilities. The CSD and subdivision would not result in a substantial increase in population or demand on wastewater systems. Wastewater system capacities are sufficient to serve the existing community and the foreseeable growth. The former Mill “A” facility is currently being converted into light industrial uses. The Eel River Brewing Company brewery is required to provide pre-treatment to minimize the impact of its discharge on the WWTF.

Wastewater collection systems are being upgraded to meet current standards of practice to serve residential and commercial areas. New collection lines, service laterals, manholes, and cleanouts will be constructed to upgrade the existing collection system and to remove collection system facilities from under buildings and into easements accessible to O&M personnel.

The planned upgrades to the collection system are expected to reduce I/I significantly and therefore flows entering the WWTF will also decrease. For planning purposes, I/I reductions have been estimated at 70%. This is believed to be a conservative estimate because the upgrades target the worst sources of I/I identified, and can therefore be reasonably expected to curb I/I by an even greater proportion.

As a result, flows reaching the WWTF will decrease substantially. Even factoring in all available residential and commercial site development, the wastewater inflows after rehabilitation of the collection system would be well below current operating conditions (see Table 2-6 of the Detailed Engineering Analysis, Appendix A). The current permitted capacity of the WWTF is 1.0 MGD. The proposed upgrades to the WWTF will provide the WWTF with the ability to meet flows and loadings forecasted for the next 20 years.

Currently, the two regulated point source dischargers in Scotia are the cogeneration plant and the WWTF, which are regulated by the same permit. TOS would continue to operate and maintain the cogeneration plant. The CSD will assume responsibility for ownership and maintenance of the WWTF. Given the changes proposed in this MSR, the CSD would require a change of name on the existing waste discharge permit. If substantial changes not planned in this MSR were to occur in the future, a new waste discharge permit would need to be pursued by the CSD.

3.1.3 Implementation Schedule

A detailed breakdown of costs and system improvements for the wastewater treatment and disposal is listed in Chapters 2 and 3 of the Detailed Engineering Analysis (Appendix A). Proposed wastewater system infrastructure modifications will occur concurrently with proposed domestic water distribution system and stormwater collection system improvements. A preliminary capital improvement program being proposed by TOS indicates construction of the wastewater collection, treatment, and disposal system starting in 2011 and continuing into 2017.

3.1.4 Determination

Ongoing upgrades to the existing infrastructure to meet level of service standards will bring the services into compliance with regulations and standards of practice that will become applicable as a public entity. With completion of these upgrades, the Scotia CSD will be able to continue providing wastewater collection, treatment, and disposal services to the town of Scotia for an additional 20 to 30 years without creating negative impacts on the level of service or the environment. Completion of wastewater facilities upgrades is part of the ongoing maintenance. Upon formation of the Scotia CSD, these facilities will have the capacity to meet levels of service standards and standards of practice normally associated with such services as well as comply with applicable regulatory requirements.

With completion of the collection and treatment infrastructure upgrades, the Scotia CSD is an appropriate wastewater service provider for the town of Scotia.

3.2 Water Supply, Storage, Treatment, and Distribution

3.2.1 Existing Level of Service and Improvements

TOS operates and maintains Scotia's water systems. The domestic Water Treatment Facility (WTF) is located on the hillside across Highway 101, east of Scotia. Currently, TOS's WTF and distribution system provides potable water to the town of Scotia and to TOS and HRC facilities. The California Department of Health Services (DHS) regulates the potable water system.

1) Water Supply

The Eel River Watershed, covering a drainage area of 3,684 square miles, is the third largest in the State of California. Based on data obtained from the California Department of Water Resources for January 1992 to the present at the Scotia gaging station, annual median flow was 1,900 cubic feet per second (cfs); median flow from May through November was 380 cfs, and median flow from December through April was 12,200 cfs. The 10^{th} percentile flow was 103 cfs and the 90^{th} percentile flow was 21,000 cfs (California Department of Water Resources, 2009). Peak discharge happened in 1964 and is estimated at approximately 752,000 cfs (Costa and Jarrett, 2008).

TOS owns Eel River diversion entitlements of up to 4,588,500 gallons per day (gpd) for drinking water, mill processes, and fire supply (7.1 cfs, or 4.6 MGD) and can provide adequate supply for the town of Scotia and HRC mill operations (Water Right License 6373). Historical records reviewed for the Detailed Engineering Analysis (Appendix A) indicate that under current conditions, the maximum daily usage was 601,000 gpd, and the average was 484,400 gpd. There is substantial reserve capacity for any reasonably foreseeable industrial development with the current water treatment system. New or expanded drinking water facilities are not necessary.

In the future there may be more light industrial operations, using the partially vacant Mill "A" building for which there is an adequate supply of water. TOS also owns the water intake structure, raw water pumping station, and raw water transmission system.

TOS will transfer the water right license to the Scotia CSD, setting aside a contractual right that guarantees HRC a specific quantity of water. The Scotia CSD will operate the diversion facility itself for purposes of conveying its own water. Regarding delivery of the water, this arrangement is structured to require the Scotia CSD to deliver the water or else give HRC the right to use the diversion facility—and any replacement facility—to divert and convey its own water supply. HRC will maintain the distribution of the water for industrial uses and fire suppression. In short, TOS would convey the water right and the diversion works to the CSD.

2) Water Storage and Distribution

The water intake is located in an infiltration gallery in the bed of the Eel River. A pumping station and piping system transfers raw water to a 1,000,000-gallon steel tank located on a concrete pad east of the WTF. The water flows to the WTF by gravity. Following treatment, finished water is

stored in a 488,000-gallon steel tank located below the WTF, directly to the west. According to the Detailed Engineering Analysis (Appendix A), the finished water storage tank foundation will require a seismic upgrade.

The domestic water distribution system needs complete replacement for lines 3 inches in diameter and smaller because lines are leaking, damaged, or unable to meet current standards (4 inch minimum diameter). As shown in the Detailed Engineering Analysis (Appendix A), over 40% of the current water usage is unaccounted for (192,000 gpd out of an average treated water production of 405,350 gpd). Unaccounted-for water may include unmetered industrial service connections, public facilities, parks and schools; loss due to leakage; and WTF losses (from filter backwashes). System loss due to leakage is believed to be a significant source of unaccounted-for water; the water supply system was installed in the 1930s and 1940s and much of it is brittle cast-iron pipe.

Proposed upgrades to the system include replacement of over 9,500 feet of main water lines, and installation of meters at every residential and commercial service connection in the domestic water system. Monitoring water use will also facilitate identification of leaks.

Additional proposed upgrades include the rerouting of certain existing distribution lines to avoid proposed property and easement/access issues for system maintenance and operation. The existing water distribution layout for Scotia is presented in Figure 4-1 of the Detailed Engineering Analysis (Appendix A). Distribution system replacement components will include:

- all new services from the new distribution lines (relocated to avoid property, structure, and easement conflicts) to residences with meters, and
- verified serviceable or installation of new services and meters to commercial and industrial users.

Because the town of Scotia is not yet a public entity and therefore does not have its own standards, outside references were used to establish baseline standards in order to determine what improvements would be proposed for Scotia's systems during initial CSD formation, and subsequent capital improvements planning (for upgrading system components to area municipal standards). These include the nearby cities of Rio Dell and Fortuna's standard improvement specifications, referred to in the Detailed Engineering Analysis (Appendix A) as the "City Standards."

Replacement of the 3-inch and smaller diameter distribution lines will meet current "City Standards," which require a minimum line size of 4 inches. Modifications to the distribution system will also include construction of facilities to provide a combination potable domestic and fire suppression water system. Figure 4-4 of the Detailed Engineering Analysis (Appendix A) shows the proposed Scotia combined water system layout.

3) Fire Suppression Water

The current fire supply tank farm is accessible by means of an existing road. The two, 500,000-gallon tanks share a level pad on the north side of the access road, independent from the drinking water supply tanks located on the south side of the access road. The water tank farm and surrounding land are zoned for

timber production and share the setting with second-growth timber. The tanks are surrounded by a clear zone to keep debris and falling limbs and trees away from the tanks.

In October 2008, engineers recommended that the two existing 500,000 gallon water tanks used for fire protection, and located at the tank farm east of Highway 101 be replaced by one new 750,000-gallon concrete water tank (SHN, October 2008). The new tank will best serve the fire protection needs of the town and industrial facilities well into the future, as well as limiting the liability of the CSD.

The existing industrial fire suppression water distribution system (excluding the new tank) will be owned and operated by HRC. Portions of the existing fire suppression water distribution system (Figure 4-3 of the Detailed Engineering Analysis, in Appendix A) will be incorporated into the new domestic water system. The Scotia CSD will take over the existing domestic (residential and commercial areas) Scotia fire distribution system. Modifications and an upgraded service to segregate the industrial system from residential and commercial will be paid for by TOS. The new Scotia CSD domestic system construction, incorporating modifications to accommodate becoming a combined potable/fire water system, will allow the Scotia CSD and HRC fire systems to work independently of each other, yet have supply redundancy in emergency situations.

A detailed breakdown of costs and system improvements is listed in Chapter 4 of the Detailed Engineering Analysis (Appendix A).

4) Water Treatment

The WTF is functioning, is in good condition, and has been well maintained. A layout of the existing WTF is shown as Figure 5-1 of the Detailed Engineering Analysis (Appendix A).

The water treatment system is operated by licensed operators. The WTF has a State-regulated quantity of chlorine gas (600 pounds), which must also be managed according to the CalARP Risk Management Plan (SHN, September 2007).

The water treatment system consistently produces high quality water. Filter effluent turbidity (which is recorded daily) indicates that average finished water turbidities under current conditions were less than 0.06 Nephelometric Turbidity Units (NTU). During this period, the maximum daily turbidity recorded was 0.50 NTU and consistently low finished water turbidities were maintained even when raw water turbidity exceeded 100 NTU (see Detailed Engineering Analysis, Appendix A).

The disinfection system feed rates and dosages are monitored on a daily basis to ensure that the chlorine residual is maintained throughout the system and to comply with California DHS requirements. A chlorine residual measurement is obtained from a service in the distribution system on a daily basis. Based on the water system filtration report, the residuals average 0.3 milligrams per Liter (Detailed Engineering Analysis, Appendix A).

Historical records cited in Section 5.4 of the Detailed Engineering Analysis (Appendix A) indicate a potable water treatment capacity of 622,000 gpd under the current loading conditions. The maximum daily usage in that period was 601,000 gpd, and the average was 405,350 gpd. The limiting portions of the treatment

system as currently operated can produce 1,244,000 gpd. The treatment could be increased, without significant changes in operation, to produce 1,450,000 gpd.

Two turbidity meters will be installed at the plant, upgrades will be made to the chlorination system, and new system electronic controls will be constructed for more efficient water treatment and operations.

A detailed breakdown of costs and system improvements is listed in Chapter 5 of the Detailed Engineering Analysis (Appendix A). A detailed breakdown of annual O&M costs is included in the Financial Analysis (Appendix C).

3.2.2 Scotia Level of Service with Improvements

Water distribution systems are being upgraded to meet current standards of practice to serve residential and commercial areas. In response to formation of the CSD, the old domestic distribution water lines need to be replaced, and water meters, installed. New services will be completed to meet current standards of practice for several local municipalities, (such as, Fortuna). Modifications to the transmission and distribution system will also include construction of facilities to provide a combination potable domestic and fire suppression water system, thus separating Scotia water infrastructure from HRC mill facilities infrastructure.

The existing industrial fire suppression water distribution system (excluding the new tank) will continue to be owned and operated by HRC, with appropriate easement access negotiated with the Scotia CSD for raw water to be acquired and independently pumped (by CSD-operated pumps) to the existing one million gallon raw water storage tank (and then diverted to the existing raw water fire tanks and the treatment plant where water is subsequently treated and stored in the existing 488,000-gallon tank). Portions of the existing non-industrial fire suppression water distribution system will be incorporated into the new domestic water system.

Service to residents will not be significantly interrupted by the infrastructure improvements, as this type of work is typically performed in municipalities to upgrade or modify existing infrastructure.

Historical records cited in Section 5.4 of the Detailed Engineering Analysis (Appendix A) indicate a potable water treatment capacity of 622,000 gpd under the current loading conditions. The maximum daily usage in that period was 601,000 gpd, and the average was 484,400 gpd. The limiting portions of the treatment system as currently operated can produce 1,244,000 gpd. The treatment could be increased, without significant changes in operation, to produce 1,450,000 gpd. The current water right allows a diversion of up to 4,588,500 gpd.

There is substantial reserve capacity for any reasonably foreseeable industrial development with the current water treatment system. As discussed earlier in Section 2.3, the possibility of growth is extremely limited by physical conditions in Scotia. No new or expanded water resource entitlements would be needed. Water system capacities are sufficient to serve the existing community. No new water treatment facilities or expansion of existing facilities would result from the CSD and subdivision; however, improvements are being prompted by the proposed transfer of operations.