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# PLAN DE EQUIPAMIENTO DE LA RED NACIONAL DE ESTACIONES METEOROLÓGICAS E HIDROLÓGICAS

OFICINA GENERAL DE OPERACIONES TÉCNICAS  
*OFICINA DE PLANEAMIENTO, COORDINACIÓN Y CONTROL*

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## PLAN DE EQUIPAMIENTO DE LA RED NACIONAL DE ESTACIONES METEOROLÓGICAS E HIDROLÓGICAS

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## 1. Introducción

El Plan de equipamiento de la red nacional de estaciones meteorológicas e hidrológicas del Senamhi; así como de aquellas estaciones operadas bajo la modalidad de convenio, tiene por finalidad sustentar técnicamente la realidad de nuestra red, en cuanto a la situación actual de su capacidad instalada, tanto de los instrumentos como de la infraestructura que constituyen la parte física de una estación, basada en el diagnóstico de la misma y de los inventarios de instrumental remitidos por las mismas Direcciones Regionales.

En tal sentido, se ha determinado que nuestra red de estaciones es deficitaria en instrumentos, visualizada desde una óptica netamente basada en la normativa técnica vigente de la Organización Meteorológica Mundial; así como, del Reglamento Técnico de Meteorología e Hidrología, el cual fue actualizado recientemente, con la finalidad de determinar la cantidad de variables que se dejan de monitorear por la falta de instrumental en función de la categoría de cada estación, lo cual va en detrimento de la representatividad de nuestra red.

Asimismo, se ha tomado en consideración aquellas estaciones que han sido inspeccionadas técnicamente por el personal de la OGOT en los últimos años; con la finalidad de contrastar la información registrada en el diagnóstico y priorizar su rehabilitación y equipamiento en un horizonte temporal al corto plazo, seguidamente aquellas estaciones que se requiere completar su equipamiento al mediano plazo y por último aquellas estaciones que demandan una mayor inversión en su infraestructura e instrumental a largo plazo.

Por tal motivo, la Oficina General de Operaciones Técnicas pone a disposición de esa Presidencia Ejecutiva, este Plan de Equipamiento; a fin de que se puedan derivar proyectos de inversión que permitan fortalecer nuestra red, con estaciones dotadas de buenas



infraestructuras, equipadas en forma completa y sobretodo permanentes en el tiempo y en su lugar; tratando de cumplir lo máximo posible con las normas técnicas, los programas de mantenimiento, inspección y capacitación; a fin de garantizar la calidad, consistencia y veracidad de los datos generados por las estaciones, siendo uno de los agentes más importantes la plana de observadores que cuenta en la actualidad nuestro Servicio.

## 2. Objetivos

### 2.1. Objetivo General

Determinar la necesidad de equipamiento de la red nacional de estaciones meteorológicas e hidrológicas del Senamhi.

### 2.2. Objetivos Específicos

Plantear metas al corto, mediano y largo plazo; a fin de equipar las estaciones de la red nacional de acuerdo a su categoría.

Valorizar el déficit de instrumental; así como del estado de la infraestructura de las estaciones que requieren ser rehabilitadas.

## 3. Justificación

Llevar a cabo este Plan es de suma importancia para los fines de gestión, planificación y proyección de nuestra red, ya que el SENAMHI, como entidad rectora de las actividades meteorológicas, hidrológicas y conexas, debe estar respaldada por una capacidad instalada de instrumentos que garanticen el cumplimiento total de los programas de observación meteorológica<sup>1</sup>, como hidrológica<sup>2</sup>; con la finalidad de monitorear el total de variables que intervienen en la definición del recurso clima; así como en los componentes del ciclo hidrológico.

<sup>1</sup> *Manual de Funciones del Observador Meteorológico*, elaborado por la OGOT/OPCC, donde se detalla el programa de observación para cada categoría de estación.

<sup>2</sup> *Manual de Funciones del Observador Hidrológico*, elaborado por la OGOT, donde se detalla el programa de observación para esta categoría de estación.



Así como, contar con un stock de instrumentos que sirvan de volantes para suplir durante el periodo que dure la calibración y mantenimiento en el Laboratorio Nacional Hidrometeorológico, con tal de evitar que se deje de realizar las observaciones en forma diaria, y así fortalecer la serie de datos de la red.

Asimismo, lograr una red de estaciones bien equipada permitirá evaluar con mayor fundamento técnico el recurso clima y agua, así como contribuir con los estudios e investigaciones que llevan a cabo las Direcciones de Línea, ya que se verían favorecidas al contar con mayor cantidad de variables climatológicas e hidrológicas monitoreadas por cada estación, lo cual permitirá optimizar primero: la inversión efectuada en una estación, segundo las funciones de un observador y tercero dotar de mayor valor agregado a la información generada.

En tal sentido, este Plan toma la parte medular del diagnóstico de la red, es decir la problemática técnica existente, representada a través de uno de los principales problemas como es el déficit de instrumentos; a fin de tomar conciencia y exhortar a las instancias superiores que se requiere equipar nuestra red, con la finalidad de fortalecer nuestra capacidad de pronóstico meteorológico, climático y de aquellos fenómenos de origen hidrometeorológicos. Razón por la cual, es vital tomar las acciones y efectuar las gestiones del caso.

#### **4. Antecedentes de la red**

El Senamhi, ha heredado una red de estaciones que han pertenecido a otras entidades, cuyas estaciones fueron instaladas, siguiendo un patrón específico de los proyectos ejecutados en ciertas zonas del territorio nacional, pero la red no ha sido diseñada siguiendo un proceso planificado de cobertura; razón por la cual es necesario considerar su crecimiento; a partir de la unidad básica espacial denominada "cuenca hidrográfica", lo cual demanda llevar a cabo un proceso de racionalización de la red.



En 1959, el Gobierno Peruano, conciente de la necesidad de realizar estudios de precipitación y de escorrentía (caudales), en las correspondientes áreas de los proyectos, acudió al Fondo Especial de las Naciones Unidas para solicitar asesoramiento y apoyo para disponer de más estaciones de observación, siendo aprobada la solicitud en el año 1961, cuyo Plan de Operaciones fue firmado por el Gobierno del Perú, el Fondo Especial y la Organización del proyecto<sup>3</sup>.

Con anterioridad a esta aprobación y ante la necesidad de desarrollo agrícola, el Gobierno del Perú decidió la creación del Servicio de Agrometeorología e Hidrología (SAH), dentro del Ministerio de Agricultura. Al término del proyecto en 1965 se instalaron las siguientes nuevas estaciones: 15 climatológicas principales, 35 climatológicas ordinarias, 199 para fines especiales, 297 pluviométricas y 58 hidrométricas.

Finalmente, las Naciones Unidas y la Organización Meteorológica Mundial, recomendó la estandarización de las mediciones, ya que existían redes operadas por otras instituciones en el Perú, aunque éstas en total no llegaban a 200 estaciones meteorológicas y no más de 20 hidrométricas.

El Senamhi como miembro de la OMM, desde su creación ha continuado operando las estaciones transferidas por el SAH en 1969 y en la actualidad opera un total de 696 estaciones convencionales y 88 automáticas, cuya categoría se puede apreciar en el cuadro N° 01.

## 5. Diagnóstico de la red

<sup>3</sup> *Plan de Reubicación de las estaciones hidrológicas del Senamhi*, presentado por la Dirección General de Hidrología y Recursos Hídricos el 24 de Julio del 2002.



## 5. Diagnóstico de la red

La situación actual de nuestra red de estaciones meteorológicas e hidrológicas está sustentada en forma detallada en el Diagnóstico<sup>4</sup> que se actualiza con los informes trimestrales de actividades de las Direcciones Regionales, los inventarios de instrumental, los informes de inspección y mantenimiento; así como los viajes de inspección técnica del personal profesional de la Oficina de Planeamiento, Coordinación y control, con la finalidad de contrastar la información que remiten las Direcciones Regionales y verificar el cumplimiento de las normas técnicas.

En tal sentido, el Diagnóstico de la red cuenta con información de aquellas estaciones que presentan deterioro en su infraestructura, otras mal ubicadas, dificultad en su acceso, recategorizadas, reubicadas, falta de instrumental, operadas bajo la modalidad de convenios; así como su proyección. Por lo tanto, este Plan toma como fuente básica dicho diagnóstico.

Cabe hacer de conocimiento que las estaciones climatológicas e hidrológicas de la red nacional, por estar ubicadas a la intemperie del lugar donde han sido instaladas, presentan rápidamente deterioro en su infraestructura e instrumental por estar expuestos, a factores naturales, lo cual demanda que la frecuencia de su mantenimiento sea mayor durante el año, de igual forma la calibración, reparación y mantenimiento de su instrumental; así como debe ser permanente la capacitación de los observadores; a fin de garantizar la calidad y representatividad de los datos.

En tal sentido, este plan pretende servir de fundamento técnico ante las instancias superiores de la situación actual de la red nacional de estaciones climatológicas e hidrológicas, tanto convencionales como

<sup>4</sup> *Diagnóstico de la Red Nacional de estaciones meteorológicas e hidrológicas del Senamhi y/o convenio, actualizado al 2009*, Elaborado por la Oficina de Planeamiento, Coordinación y Control.



automáticas del Senamhi; a fin de lograr una solución futura a esta problemática, proponiendo metas al corto, mediano y largo plazo, lo cual permitirá llevar a cabo un proceso gradual de desarrollo de la red, considerando las necesidades de información y fundamentado en metodologías afines con la geografía del territorio nacional. En tal sentido, es necesario definir en primer lugar la red mínima, seguido de la básica, complementaria y óptima posible, cuya imagen objetivo sea la de contar con una red de estaciones climatológicas e hidrológicas convencionales y automáticas estratégicamente ubicadas, a fin de que sean representativas, consistentes en la información generada y uniformes en cuanto al cumplimiento del programa de observación, para lo cual es importante mantener en buen estado sus infraestructuras, equipamiento y capacitación de la plana de observadores, con la finalidad de que la serie de datos sea utilizada en los procesos de planificación y ordenamiento del territorio; así como en el aprovechamiento racional del recurso hídrico y demás potencialidades.

## 6. Clasificación de las estaciones

De acuerdo a las normas técnicas de la O.M.M., ha clasificado las estaciones en meteorológicas agrícolas, climatológicas, sinópticas e hidrológicas, a su vez cada una de ellas está dividida en categorías; sin embargo, existen otras estaciones especiales como por ejemplo: vigilancia de la atmósfera global, contaminación del aire, marítimas, etc.

Cabe mencionar que en la actualidad el Senamhi no cuenta con estaciones sinópticas, por lo que depende de la red sinóptica de CORPAC, quienes suministran la información que se toma para realizar el pronóstico; razón por la cual, es prioritario equipar algunas estaciones climatológicas con sistema de comunicación HF, VHF, radio módem, telefonía móvil y satelital para contar con datos en tiempo real que sirvan de suministro a los sistemas de pronóstico y sistemas de alerta temprana.





En cuanto a las estaciones automáticas la OMM las considera como complementarias de una red convencional, de acuerdo al siguiente detalle:

### **6.1. Estaciones meteorológicas agrícolas<sup>5</sup>**

Estaciones instaladas con el fin de proporcionar asistencia a la agricultura. Aquí, el término agricultura se utiliza en su más amplio sentido, es decir incluye particularmente la horticultura, la ganadería y la silvicultura. Las estaciones meteorológicas agrícolas incluyen observaciones particulares sobre el medio físico; así como, observaciones climatológicas que se efectúan en las estaciones meteorológicas de todo tipo.

Las estaciones meteorológicas agrícolas deberán estar situadas en lugares verdaderamente representativos de las condiciones naturales de la región agrícola y/o forestal de la zona, de preferencia.

#### **6.1.1. Estación meteorológica agrícola principal (MAP)**

Es una estación que facilita simultáneamente información meteorológica y biológica detallada y en la que se efectúa investigación sobre agrometeorología. Los medios instrumentales, el alcance y la frecuencia de las observaciones meteorológicas y biológicas, y el personal profesional han de ser tales que permitan realizar investigaciones sobre cuestiones agrometeorológicas de interés para el país o región interesada, el horario de observación para este tipo de estación comprende las 07, 10, 13, 16, 19 y 22 hora local.

#### **6.1.2. Estación meteorológica agrícola auxiliar (MAA)**

Es una estación que facilita información biológica y meteorológica. La información meteorológica puede comprender datos como la

<sup>5</sup> Guía de Prácticas Agrometeorológicas OMM N° 134, capítulo 2 – Elementos agrometeorológicos y su observación.



temperatura, humedad del suelo, la evapotranspiración potencial, sondeos detallados de las capas más bajas de la atmósfera, etc.; la información biológica puede referirse a la fenología, aparición y desarrollo de las enfermedades vegetales, etc.

#### **6.1.3. Estación meteorológica agrícola ordinaria (MAO)**

Es una estación que facilita normalmente y de manera simultánea información meteorológica y biológica, y que puede estar equipada para participar en la investigación de problemas determinados; en general, el programa de observaciones biológicas o fenológicas para la investigación dependerá de las condiciones climáticas locales de la estación.

En una estación meteorológica agrícola ordinaria el programa de observación, consiste en la medida de los elementos meteorológicos igual que una MAP; sin embargo, alguno de los elementos de carácter biológico, el período de funcionamiento de este tipo de estación puede limitarse a un tiempo más corto, en composición con el de la estación principal. Debe servir como estación complementaria a una red básica ya existente.

#### **6.1.4. Estación meteorológica agrícola para propósitos específicos (MAPE)**

Es una estación meteorológica agrícola establecida con carácter temporal o permanente, para la investigación de uno o de varios elementos de determinados fenómenos. El horario de observación para este tipo de estación, está en función del programa especial a ejecutar.

### **6.2. Estaciones climatológicas**

Son aquellas donde se efectúan observaciones para estudios climatológicos. El clima corresponde a las condiciones meteorológicas consideradas en un largo período de tiempo.



#### **6.2.1. Estación climatológica principal (CP)**

Estación climatológica en la que se hacen lecturas horarias de observaciones, por lo menos tres veces por día (07, 13 y 19 hora local), además de la tabulación horaria de las lecturas de los registros autográficos.

#### **6.2.2. Estación climatológica ordinaria (CO)**

Estación en la que se efectúan observaciones tres veces al día (07, 13 y 19 hora local), incluidos las correspondientes a la temperatura máxima y mínima y la cantidad diaria de precipitación.

#### **6.2.3. Estación climatológica de propósitos específicos (PE)**

Estación climatológica instalada para observar uno o varios elementos determinados.

#### **6.2.4. Estación pluviométrica (PLU)**

Estación en la que solo se efectúa dos observaciones diarias de precipitación (07 y 19 hora local). La instrumentación consiste en un pluviómetro ordinario para zonas accesibles. Cuando se trate de zonas desérticas o zonas poco accesibles se instalará un pluviómetro totalizador, puede estar complementado por un pluviógrafo.

### **6.3. Estaciones sinópticas**

Son aquellas donde se efectúan observaciones meteorológicas para las necesidades de la meteorología sinóptica; es decir, pronosticar la futura evolución del tiempo. El horario de observación está comprendidas a las 00, 06, 12 y 18 respecto al tiempo medio de Greenwich (TMG).

Las estaciones sinópticas se clasifican en:



### 6.3.1. Superficiales

Pueden ser: estaciones terrestres principales, estaciones marítimas fijas, estaciones marítimas móviles y estaciones automáticas principales.

### 6.3.2. De altitud.

Ambas se clasifican en:

Estaciones de radioviento/radiosonda; y

Estaciones de globos piloto

## 6.4. Estaciones hidrológicas

Las estaciones de observación hidrológica son aquellas en las cuales se efectúan observaciones de uno o varios elementos hidrológicos.

El observador de una estación hidrológica de acuerdo al grado de implementación de instrumental de la estación y cuando efectúe aforos debe contar con un ayudante.

### 6.4.1. Estación Hidrométrica

Es una estación en la cual se efectúan observaciones y/o mediciones de los elementos de la escorrentía superficial. Las estaciones hidrométricas, deberán estar emplazadas en un sitio y en condiciones tales que, permitan el funcionamiento ininterrumpido de la estación por lo menos durante 10 años, a menos que los fines específicos de la misma justifiquen su funcionamiento durante un período de tiempo más corto. En una estación hidrométrica se deberán observar uno o más elementos, éstos a su vez se clasifican en:

- a. estaciones hidrométricas principales
- b. Estaciones hidrométricas secundarias

### 6.4.2. Estaciones Climatológicas para fines Hidrológicas



Estas estaciones comprenden la estimación cuantitativa de las variables meteorológicas que intervienen en el ciclo hidrológico, como por ejemplo temperatura, evaporación, vientos, etc. en apoyo a fines hidrológicos.

#### **6.4.3. Estaciones de Agua Subterránea**

Son aquellas en las cuales se efectúan observaciones y/o mediciones de los elementos de la escorrentía subterránea, se clasifican en:

- a. estaciones de agua subterránea principales
- b. estaciones de agua subterránea secundarias

Nuestro Servicio no cuenta con este tipo de estación, siendo recomendable que pueda proyectarse para realizar el monitoreo del nivel de la capa freática; así como el estudio de la calidad de agua por ser el ente rector de la meteorología y de la hidrología a nivel nacional.

#### **6.4.4. Estaciones Hidrológicas para propósitos específicos**

Son aquellas en las cuales se efectúan observaciones y/o mediciones de elementos hidrológicos para un fin especial y temporal.

Además se ha creído por conveniente incluir dos clasificaciones más de estaciones hidrológicas, ya que en nuestro país es común diferenciar a las estaciones hidrológicas en Limnimétricas y limnigráficas.

#### **6.4.5. Estación Limnimétrica (HLM)**

Es el lugar donde se obtienen datos del nivel de agua mediante un programa observacional sistemático. El instrumento de medición directa es el limnímetro, regla o escala.



#### 6.4.6. Estación Limnigráfica (HLG)

Estación instalada en ríos principales donde no admite normalmente encauzamiento ni vertederos.

#### **NOTA: Estaciones automáticas**

Si bien no son parte de la clasificación de las estaciones meteorológicas o hidrológicas, conforme a la O.M.M. y al Reglamento Técnico del Senamhi, ya que se consideran estaciones complementarias de una red, se pueden definir como aquellas estaciones en las que los instrumentos efectúan y transmiten o registran automáticamente las observaciones, realizando directamente, en caso necesario, la conversión a la clave correspondiente, o bien realizándose esa conversión en una estación transcriptoras.

Se clasifican en:

#### 6.4.7. Estación meteorológica automática

Estará definido por el número de sensores meteorológicos que posea la estación.

#### 6.4.8. Estación hidrológica automática

Estará definido por el número de sensores meteorológicos que posea la estación, además incluye necesariamente el sensor de nivel de agua.

### 7. Variables meteorológicas e hidrológicas

#### 7.1. Variables meteorológicas

A continuación se presenta un cuadro N° 02 donde se resume las variables meteorológicas<sup>6</sup> que se miden de acuerdo a la categoría de las estaciones meteorológicas agrícolas<sup>7</sup>, climatológicas<sup>8</sup> y

<sup>6</sup> Compendio de Apuntes de climatología para la Formación del Personal Meteorológico de la Clase IV OMM N° 327: Elementos Climatológicos que han adquirido valores mediante instrumentos u observaciones visuales.

<sup>7</sup> Guía de Prácticas Agrometeorológicas OMM N° 134, capítulo 2 – Elementos agrometeorológicos y su observación, 2.2 Clasificación de estaciones

<sup>8</sup> Guía de Prácticas Climatológicas OMM N° 100



sinópticas<sup>9</sup>, asimismo se indica las horas de observación que deben ser tomados los datos de estas variables y aquellas que requieren un horario específico como la precipitación y la evaporación que se realiza a las: 07:00 y 19:00 Hora Local (HL) y la insolación (duración del brillo solar) solamente a las: 19:00 HL. Cabe mencionar que; lo ideal es que, en cada estación se mida todas las variables indicadas en este cuadro, pero nuestra realidad es diferente, ya que existe un alto déficit de instrumentos que por motivos de política institucional y de índole presupuestal no se considera la adquisición de instrumental convencional, lo que ha originado una interrupción de las series de datos debido a la falta de reemplazo del instrumental, renovación, implementación y otros factores, teniendo como consecuencia series de datos limitadas e incompletas, siendo un factor limitante para los estudios y cumplimiento de las funciones básicas del Servicio Meteorológico Nacional.

<sup>9</sup> Manual del Sistema Mundial de Observación – OMM N° 544, Parte III.- Subsistema de superficie, III-6 Estaciones sinópticas de superficie, Volumen I, año 1981.



CUADRO N° 02

## Variables Agrometeorológicas – Climatológicas y Sinópticas

| Variables                        | Categoría de estaciones                 |     |     |   |                           |    |   |     |                                 |      |   |
|----------------------------------|---|-----|-----|---|---------------------------|----|---|-----|---------------------------------|------|---|
|                                  | Meteorológicas Agrícolas                |     |     |   | Climatológicas            |    |   |     | Sinópticas                      |      |   |
|                                  | MAP                                     | MAA | MAO | MAPE  | CP                        | CO | PE  | PLU | Sup.                            | Alt. |   |
| Estado del Tiempo                | X                                       |     |     | Las variables a medir estarán en función a los fines que se persiguen | X                         | X  | Las variables a medir estarán en función a los fines que se persiguen |     | X                               |      |   |
| Temperatura del aire (extremas)  | X                                       | X   |     |   | X                         | X  |   |     |                                 | X    | X |
| Temperatura del suelo            | X                                       | X   |     |   | X                         |    |   |     |                                 |      |   |
| Temperatura del agua             | X                                       |     |     |   |                           |    |   |     |                                 |      |   |
| Humedad del aire                 | X                                       |     |     |   | X                         | X  |   |     |                                 | X    | X |
| Humedad del suelo                | X                                       | X   |     |   |                           |    |   |     |                                 |      |   |
| Presión atmosférica              | X                                       |     |     |   | X                         |    |   |     |                                 | X    | X |
| Tendencia de presión             |   |     |     |   |                           |    |   |     |                                 | X    |   |
| Turbulencia y mezcla del aire    | X                                       |     |     |   |                           |    |   |     |                                 |      |   |
| Precipitación                    | X                                       |     |     |   | X                         | X  |   |     | X                               | X    |   |
| Radiación Solar                  | X                                       |     |     |   | X                         |    |   |     |                                 |      |   |
| Dirección y velocidad del viento | X                                       |     |     |   | X                         | X  |   |     |                                 | X    | X |
| Evaporación del suelo y del agua | X                                       | X   |     |   | X                         | X  |   |     |                                 |      |   |
| Insolación                       | X                                       |     |     |   | X                         | X  |   |     |                                 |      |   |
| Altura napa freática             | X                                       |     |     |   |                           |    |   |     |                                 |      |   |
| Nubosidad                        | X                                       |     |     |   | X                         | X  |   |     |                                 | X    |   |
| Tipo y cantidad de nubes         | X                                       |     |     |   | X                         | X  |   |     |                                 | X    |   |
| Altura de la base de nubes       | X                                       |     |     |   | X                         | X  |   |     |                                 | X    |   |
| Visibilidad                      | X                                       |     |     |   | X                         | X  |   |     |                                 | X    |   |
| Estado del suelo                 | X                                       |     |     | X   |                           |    |   |     |                                 |      |   |
| <b>Horas de observación</b>      | 07:00, 13:00, 16:00, 19:00 y 22:00 (HL) |     |     |   | 07:00, 13:00 y 19:00 (HL) |    |   |     | 00:00, 06:00, 12:00 y 18:00 TMG |      |   |

**7.2. Variables hidrológicas**

De igual forma se presenta el cuadro N° 03, donde se indica las variables meteorológicas para fines hidrológicos que se miden de





acuerdo a la categoría de las estaciones hidrométricas, climatológicas para fines hidrológicos, estaciones de agua subterránea y estaciones hidrológicas para propósitos específicos; así como las horas de observación, las estaciones limnimétricas y limnigráficas es una denominación propia del Servicio Meteorológico Nacional para diferenciarlas, ya que ambas miden el nivel del agua.

**CUADRO N° 03**  
**Variables Meteorológicas para fines Hidrológicos**

| Variables                                  | Categoría de estaciones                                    |  |                              |  |
|--|--|--|------------------------------|--|
|  | Estación Hidrométrica                                      | Estación climatológica para fines hidrológicos | Estación de agua subterránea | Estación Hidrológica para propósitos específicos                       |
| Nivel de los ríos, lagos, lagos y embalses | X  |  |                              | Las variables a medir, estarán en función a los fines que se persiguen |
| Flujo de las corrientes                    | X  |  |                              |  |
| Transporte y depósito de sedimentos        | X  |  |                              |  |
| Temperatura y propiedades físicas del agua | X  |  | X                            |  |
| Propiedades químicas del agua              | X  |  | X                            |  |
| Humedad del suelo                          | X  |  |                              |  |
| Precipitación                              |  | X  |                              |  |
| Temperatura del aire                       |  | X  |                              |  |
| Humedad del aire                           |  | X  |                              |  |
| Velocidad y dirección del viento           |  | X  |                              |  |
| Cantidad y tipo de nubes                   |  | X  |                              |  |
| Capa de nieve                              |  | X  |                              |  |
| Evaporación                                |  | X  |                              |  |
| Radiación solar                            |  | X  |                              |  |
| Insolación                                 |  | X  |                              |  |
| Temperatura del suelo                      |  | X  |                              |  |
| Presión atmosférica                        |  | X  |                              |  |
| Humedad del suelo                          |  | X  |                              |  |
| Nivel del agua                             |  |  | X                            |  |
| <b>Horas de observación</b>                | Niveles : 06:00, 10:00, 14:00 y 18:00 Hora Local           |  |                              |  |
|  | Aforos : 08:00 Hora Local. Días Lunes, Miércoles y Viernes |  |                              |  |

**Fuente:** Reglamento Técnico de Meteorología e Hidrología del Senamhi. 1978. Lima-Perú.



## 8. Instrumentos por categoría

Los instrumentos que se instalan en una estación tanto meteorológica como hidrológica, tienen que reunir ciertos requisitos básicos<sup>10</sup>, a fin de satisfacer lo siguiente:

- Exactitud
- Sencillez de diseño
- Fiabilidad
- Durabilidad
- Facilidad de funcionamiento

Con respecto a los dos primeros requisitos, es importante que un instrumento pueda mantener su exactitud durante un largo periodo.

Las calibraciones iniciales de los instrumentos revelan, en general, desviaciones del resultado ideal, por lo que es preciso efectuar correcciones en los datos observados durante las operaciones normales. Es importante conservar las correcciones con los instrumentos en el emplazamiento de observación y dar a los observadores indicaciones claras sobre su uso.

La sencillez, la robustez y la facilidad de funcionamiento y mantenimiento son importantes, ya que la mayoría de los instrumentos meteorológicos se utilizan continuamente, año tras año, y pueden estar situados lejos de las instalaciones de reparación adecuadas. La construcción robusta es especialmente conveniente en los instrumentos total o parcialmente expuestos a la intemperie.

Respeto a estas características permitirá, frecuentemente, reducir los gastos generales para proporcionar buenas observaciones, con los que se compensa el costo inicial.

<sup>10</sup> Guía de Instrumentos y Métodos de Observación Meteorológicos OMM N° 08, sexta edición, año 1996.



Las mediciones meteorológicas directas se hacen por medio de instrumentos de medición que tienen sus sensores ubicados en el punto de medición. A su vez, estos instrumentos pueden ser denominados instrumentos meteorológicos directos e incluir entre ellos los instrumentos meteorológicos de superficie más convencionales, tales como termómetros, higrómetros, barómetros, anemómetros, etc. Los instrumentos meteorológicos directos pueden usarse para la medición de variables meteorológicas a cierta distancia del observador, siendo entonces llamados instrumentos meteorológicos de lectura a distancia<sup>11</sup>.

### 8.1. Instrumentos para estaciones meteorológicas agrícolas

La cantidad de instrumentos que se instalan en una estación meteorológica agrícola, depende de la categoría de la estación si se trata de una estación meteorológica agrícola principal (MAP), meteorológica agrícola auxiliar (MAA), meteorológica agrícola ordinaria (MAO) y meteorológica agrícola de propósitos específicos (MAPE); así como, de la disponibilidad de los mismos, a fin de monitorear las variables meteorológicas conforme se indica a continuación mediante el cuadro N° 04, tanto instrumentos de lectura directa como de registro, cabe indicar que sus precios están señalados en los anexos.

<sup>11</sup> OMM N° 622 Compendio de Apuntes Sobre Instrumentos Meteorológicos para la Formación del Personal Meteorológico de las Clases III y IV, preparado por D.A.SIMIDCHIEV, volumen I, parte I –



## CUADRO N° 04

## Instrumental para estaciones meteorológicas agrícolas

| MAP  | MAA                                   | MAO               | MAPE  |
|--|---------------------------------------|-------------------|---|
| <b>Instrumentos de Lectura Directa</b>           | <b>Instrumento de Lectura Directa</b> | Según el programa | Los instrumentos a instalarse será de acuerdo a los fines que se persiguen. |
| Termómetro de Máxima y Mínima                    | Anemómetro                            |                   |   |
| Psicrómetro con ventilación                      | Veleta                                |                   |   |
| Barómetro  | <b>Instrumento de Registro</b>        |                   |   |
| Tanque de Evaporación                            | Pluviógrafo                           |                   |   |
| Anemómetro Totalizador                           | Termohigrógrafo                       |                   |   |
| Pluviómetro                                      |                                       |                   |   |
| Termómetro mínima junto al suelo                 |                                       |                   |   |
| Geotermómetros (2,5,10,15,20,30,40,50 y 100 cm.) |                                       |                   |   |
| Lisímetro  |                                       |                   |   |
| Tensiómetro                                      |                                       |                   |   |
| Termómetro a nivel de tanque                     |                                       |                   |   |
| <b>Instrumentos de Registro</b>                  |                                       |                   |   |
| Anemocinemógrafo                                 |                                       |                   |   |
| Termohigrografo                                  |                                       |                   |   |
| Microbarógrafo                                   |                                       |                   |   |
| Pluviógrafo                                      |                                       |                   |   |
| Evaporígrafo                                     |                                       |                   |   |
| Heliógrafo                                       |                                       |                   |   |
| Piranómetro                                      |                                       |                   |   |
| Registrador de mojadura                          |                                       |                   |   |
| Anemógrafo (*)                                   |                                       |                   |   |
| * Opcional                                       |                                       |                   |   |

Fuente: Reglamento Técnico de Meteorología e Hidrología del Senamhi. 1978. Lima-Perú.

## 8.2. Instrumentos para estaciones climatológicas y sinópticas

Los instrumentos que se instalan en una estación climatológica, están en función directa de las variables que se monitorea y de acuerdo a la categoría de la estación, a continuación se muestra el cuadro N° 05, donde se indica los instrumentos de lectura directa y los de registro.



CUADRO N° 05

Instrumental para estaciones climatológicas y sinópticas

| Estaciones Climatológicas   |                             |  |                           | Estaciones Sinópticas     |                    |  |
|-----------------------------|-----------------------------|--|---------------------------|---------------------------|--------------------|--|
| Climatológica Principal     | Climatológica Ordinaria     | Propósitos Específicos   | Pluviométrica             | En Superficie             | Altitud            |  |
| <b>De Lectura Directa</b>   | <b>De Lectura Directa</b>   | Los Instrumentos a instalarse serán de acuerdo a los fines que se persiguen. | <b>De Lectura Directa</b> | <b>De Lectura Directa</b> |                    |  |
| Termómetro de Máxima        | Termómetro de Máxima        |  | Pluviómetro               | Termómetro de Máxima      | Radio Viento       |  |
| Termómetro de Mínima        | Termómetro de Mínima        |  |                           | Termómetro de Mínima      | Radio Sonda        |  |
| Psicrómetro con ventilación | Psicrómetro sin ventilación |  |                           | Psicrómetro               | Globos Pilotos     |  |
| Barómetro                   | Pluviómetro                 |  |                           | Barómetro                 |                    |  |
| Evaporímetro                | Termómetro de agua          |  |                           | Pluviómetro               |                    |  |
| Tanque de Evaporación       | Tanque de evaporación       |  |                           | Anemómetros               |                    |  |
| Pluviómetro                 | Veleta                      |  |                           |                           |                    |  |
| Pluviómetro                 |                             |  |                           |                           |                    |  |
| Geotermómetros              |                             |  |                           |                           |                    |  |
| <b>De Registro</b>          | <b>De Registro</b>          |  |                           | <b>De Registro</b>        | <b>De Registro</b> |  |
| Termógrafo                  | Heliógrafo                  |  |                           | Pluviógrafo               | Microbarógrafo     |  |
| Higrógrafo                  |                             |  |                           |                           | Termógrafo *       |  |
| Microbarógrafo              |                             |  |                           |                           | Higrógrafo *       |  |
| Pluviógrafo                 |                             |  |                           |                           | Pluviógrafo *      |  |
| Heliógrafo                  |                             |  |                           |                           |                    |  |
| Piranómetro                 |                             |  |                           |                           |                    |  |
| Anemógrafo (*)              |                             |  |                           |                           |                    |  |
| * Opcional                  |                             |  |                           |                           |                    |  |

**Fuente:** Reglamento Técnico OMM N° 49 de la Organización Meteorológica Mundial – volumen I

### 8.3. Instrumentos para estaciones hidrológicas

Los instrumentos que se instalan en una estación hidrológica, están en función directa de las variables que se monitorea, a continuación se muestra el cuadro N° 06, donde se indica los instrumentos de lectura directa y los de registro.



CUADRO N° 06.

## Instrumental para estaciones hidrológicas

| Estaciones Hidrológicas                     |  |  |  |
|---|--|--|--|
| Hidrométricas                               | Climatológicas para fines Hidrológicos | Para Agua Subterránea                            | Para propósitos Específicos  |
| <b>Estaciones Hidrométricas Principal</b>   | Mira Limnimétrica                      | <b>Estaciones de Agua Subterránea Principal</b>  | Los instrumentos a instalar serán de acuerdo a los fines que se persiguen. |
| Mira limnimétrica                           | Limnígrafo                             | Mira limnimétrica                                |  |
| Correntómetro                               | Termómetro de Máxima                   | Hidrotermométrico del agua                       |  |
| Muestreador de sedimentos                   | Termómetro de Mínima                   | Muestreador químico del agua                     |  |
| Hidrotermómetro                             | Psicrómetro                            |  |  |
| Limnígrafo                                  | Anemómetro                             |  |  |
| Flotadores                                  | Veleta                                 |  |  |
| Cronómetro                                  | Evaporímetro                           |  |  |
| Tubo de Pitot                               | Piranómetro                            |  |  |
| Winche                                      | Heliógrafo                             |  |  |
| Muestreador de calidad de agua              | Geotermómetros                         |  |  |
|   | Barómetro                              |  |  |
|   | Tensiómetro                            |  |  |
|   | Pluviómetro                            |  |  |
| <b>Estaciones Hidrométricas Secundarias</b> |  | <b>Estaciones de Agua Subterránea Secundaria</b> |  |
| Mira Limnimétrica                           |  | Nivel del Agua                                   |  |
| Limnígrafo                                  |  |  |  |

Fuente: Reglamento Técnico OMM N° 49 de la Organización Meteorológica Mundial – volumen III

#### 8.4. Instrumentos para estaciones automáticas

Los instrumentos para estaciones automáticas están referidos a los sensores, constituidos por dispositivos y componentes electrónicos, capaces de convertir señales analógicas en digitales.

### 9. Metas

#### 9.1. Corto plazo

En este horizonte temporal comprendido de 1 a 2 años, se ha considerado un total de 46 estaciones meteorológicas automáticas (38 marca "Sutron", que fueron adquiridas mediante el financiamiento



del Banco Mundial y 08 propuestas por la DGM), las cuales se encuentran ubicadas dentro de una estación convencional, para lo cual se ha priorizado su equipamiento, por las siguientes razones:

- a. Contrastar el sensor automático con el instrumento convencional; a fin de que tengan el mínimo error.
- b. Evitar la falta de registro de información cuando, tanto el sensor automático o el instrumento convencional presentarán fallas.
- c. Dar continuidad al registro de información, mientras dure el proceso de reparación y calibración de los sensores.

Así mismo:

- Renovar el cerco perimétrico de aquellas estaciones consideradas.
- Reforzar la seguridad del cerco perímetro de la estación meteorológica convencional.

Cabe indicar que estas estaciones automáticas fueron propuestas por las direcciones de línea; cuya distribución permiten contar con una mayor cobertura y representatividad, ya que transmiten la información meteorológica en tiempo cuasi real a la sede central, para contribuir en las actividades del pronóstico que emite el senamhi.

En tal sentido, mediante el cuadro N° 07 se detalla la cantidad de instrumentos que se requieren para que exista paridad entre los sensores de la estación automática versus los instrumentos de la estación convencional. Cabe hacer de conocimiento que se ha



considerado en esta meta la adquisición de equipos sub-patronos; como es el caso, de los barómetros digitales portátiles de alta precisión, para que sean utilizados por el personal técnico de cada sede regional; a fin de que realicen la contrastación del sensor de presión atmosférica que posee cada estación automática, ya que resulta muy costoso instalar en cada una de ellas un barómetro mercurial con su respectiva sala de instrumental (además el mercurio ha sido considerado fuera de uso por su toxicidad

Mediante el cuadro N° 08, se ha determinado este requerimiento de instrumental valorizado en \$ 693,830.00 Dólares Americanos, cifra que se necesita para priorizar este equipamiento en el corto plazo.

Asimismo, por el hecho de que exista tanto una estación convencional y una estación automática en el mismo terreno; es necesario reforzar su seguridad, con la finalidad de disminuir la frecuencia de robos de los sensores; así como también ampliar su cerco perimétrico en algunos casos, determinándose mediante el cuadro N° 09, la suma de \$ 36,091.77 Dólares Americanos para cumplir tal fin.

En tal sentido, la suma total que se necesita en el corto plazo es la siguiente:

| <u>Actividad</u>                | <u>Financiamiento</u> |
|---------------------------------|-----------------------|
| Equipamiento para contrastación | 693,830.00            |
| Infraestructura para seguridad  | <u>36,091.77</u>      |
|                                 | <b>\$ 729,921.77</b>  |

## 9.2. Mediano plazo

En este periodo comprendido de 3 a 5 años para su ejecución, se ha considerado aquellas estaciones convencionales que fueron propuestas por las Direcciones Regionales para su rehabilitación mediante el proyecto de inversión 2007 y 2008; pero por razones de restricción económica por parte del Ministerio de Economía y





CUADRO N° 08  
VALORIZADO DEL REQUERIMIENTO DE INSTRUMENTAL A CORTO PLAZO (US \$)

| N°           | DDRR's     | Tipo    | Modelo      | Estación           | Marca       | Estación Convencional  | ESTACION CONVENCIONAL                        |             |                                 |                              |                            |                                       |            |            |               |         | ESTACION AUTOMÁTICA METEOROLÓGICA | TOTAL |
|--------------|------------|---------|-------------|--------------------|-------------|------------------------|--|-------------|---------------------------------|------------------------------|----------------------------|---------------------------------------|------------|------------|---------------|---------|-----------------------------------|-------|
|              |            |         |             |                    |             |                        | INSTRUMENTOS DE LECTURA DIRECTA QUE REQUIERE |             |                                 |                              |                            | INSTRUMENTOS DE REGISTRO QUE REQUIERE |            |            |               |         |                                   |       |
|              |            |         |             |                    |             |                        | PSICROMETRO AUGUST                           | PLUVIOMETRO | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO A NIVEL DE TANQUE | BAROMETRO DIGITAL PORTATIL | PIRANOMETRO                           | ANEMOGRAFO | HELIOGRAFO | TERMIGROGRAFO |         |                                   |       |
| 1            | Piura      | AgroMet | Met-1       | Ayabaca            | Sutron      | CP Ayabaca             | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 0          | 0          | 1,960         |         | 13,660.0                          |       |
| 2            | Piura      | AgroMet | Met-1       | Huamaca            | Sutron      | CO Huamaca             | 1,000  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 3,200.0                           |       |
| 3            | Lambayeque | AgroMet | Met-1       | Bagua              | Sutron      | CO Bagua               | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 0          | 0          | 0             |         | 11,700.0                          |       |
| 4            | Lambayeque | AgroMet | Met-1       | Olmos              | Sutron      | CO Olmos               | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 2,200.0                           |       |
| 5            | Cajamarca  | Meteo   | Met-2       | Chugur             | Sutron      | Plu Chugur             | 1,000  | 350         | 960                             | 0                            | 1,500                      | 8,000                                 | 8,200      | 2,430      | 1,960         |         | 24,400.0                          |       |
| 6            | Cajamarca  | Meteo   | Met-2       | Quiruvilca         | Sutron      | Plu Quiruvilca         | 1,000  | 350         | 960                             | 0                            | 0                          | 0                                     | 8,200      | 2,430      | 1,960         |         | 14,900.0                          |       |
| 7            | Cajamarca  | AgroMet | Met-1       | San Marcos         | Sutron      | CO San Marcos          | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 1,960         |         | 4,160.0                           |       |
| 8            | Lima       | AgroMet | Met-1       | Carania            | Sutron      | PE Carania             | 1,000  | 0           | 960                             | 2,200                        | 1,500                      | 8,000                                 | 0          | 2,430      | 1,960         |         | 18,050.0                          |       |
| 9            | Lima       | AgroMet | Met-1       | Chavin             | Sutron      | CO Chavin              | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 2,200.0                           |       |
| 10           | Lima       | AgroMet | Met-1       | Huaros             | Sutron      | Plu Huaros             | 1,000  | 350         | 960                             | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 1,960         |         | 8,900.0                           |       |
| 11           | Lima       | Meteo   | Met-2       | Jardines de la Paz | Sutron      | Sin Est. Conv.         | 0  | 0           | 0                               | 0                            | 0                          | 0                                     | 0          | 0          | 0             |         | 0.0                               |       |
| 12           | Lima       | AgroMet | Met-1       | Recuay             | Sutron      | CO Recuay              | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 8,200      | 0          | 0             |         | 10,400.0                          |       |
| 13           | Ica        | Meteo   | Met-2       | Challaca           | Sutron      | CO Challaca            | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 8,200      | 0          | 0             |         | 19,900.0                          |       |
| 14           | Ica        | AgroMet | Met-1       | Cora Cora          | Sutron      | CO Cora Cora           | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 0             |         | 4,630.0                           |       |
| 15           | Ica        | AgroMet | Met-1       | Ocucaje            | Sutron      | CO Ocucaje             | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 2,200.0                           |       |
| 16           | Ica        | AgroMet | Met-1       | Paucaray           | Sutron      | CO Paucaray            | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 1,960         |         | 4,160.0                           |       |
| 17           | Arequipa   | AgroMet | Met-1       | Cotahuasi          | Sutron      | CO Cotahuasi           | 0  | 0           | 960                             | 2,200                        | 1,500                      | 8,000                                 | 0          | 2,430      | 1,960         |         | 17,050.0                          |       |
| 18           | Arequipa   | AgroMet | Met-1       | Chivay             | Sutron      | CO Chivay              | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 1,960         |         | 4,160.0                           |       |
| 19           | Arequipa   | Meteo   | Met-2       | La Angostura       | Sutron      | CO La angostura        | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         |         | 14,790.0                          |       |
| 20           | Tacna      | AgroMet | Met-1       | Moquegua           | Sutron      | CP Moquegua            | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 0          | 0          | 1,960         |         | 13,660.0                          |       |
| 21           | Loreto     | Meteo   | Met-2       | Cabalococha        | Sutron      | CO Cabalococha         | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 8,200      | 2,430      | 1,960         |         | 24,290.0                          |       |
| 22           | Loreto     | AgroMet | Met-1       | Contamana          | Sutron      | CO Contamana           | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 1,960         |         | 4,160.0                           |       |
| 23           | Loreto     | Meteo   | Met-2       | Juancito           | Sutron      | CO Juancito            | 0  | 350         | 0                               | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         |         | 15,140.0                          |       |
| 24           | Loreto     | AgroMet | Met-1       | Pevas              | Sutron      | CO Pevas               | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 1,960         |         | 6,590.0                           |       |
| 25           | Loreto     | AgroMet | Met-1       | Sta. Clotilde      | Sutron      | CO Sta Clotilde        | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 1,960         |         | 6,590.0                           |       |
| 26           | Loreto     | Meteo   | Met-2       | Trompeteros        | Sutron      | Sin Est. Conv.         | 1,000  | 350         | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         |         | 17,100.0                          |       |
| 27           | San Martín | AgroMet | Met-1       | El Porvenir        | Sutron      | MAP El Porvenir        | 0  | 0           | 0                               | 0                            | 0                          | 8,000                                 | 0          | 0          | 0             |         | 8,000.0                           |       |
| 28           | San Martín | AgroMet | Met-1       | Naranjillo         | Sutron      | CO Naranjillo          | 0  | 0           | 0                               | 2,200                        | 1,500                      | 0                                     | 0          | 0          | 0             |         | 3,700.0                           |       |
| 29           | Huánuco    | AgroMet | Met-1       | Pto. Inca          | Sutron      | CO Pto Inca            | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 0          | 0          | 0             |         | 11,700.0                          |       |
| 30           | Junin      | AgroMet | Met-1       | Lircay             | Sutron      | CO Lircay              | 0  | 0           | 960                             | 2,200                        | 1,500                      | 8,000                                 | 0          | 2,430      | 0             |         | 15,090.0                          |       |
| 31           | Junin      | AgroMet | Met-1       | Oxapampa           | Sutron      | CO Oxapampa            | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 2,200.0                           |       |
| 32           | Junin      | AgroMet | Met-1       | Satipo             | Sutron      | CO Satipo              | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 0             |         | 4,630.0                           |       |
| 33           | Junin      | AgroMet | Met-1       | Tarma              | Sutron      | CO Tarma               | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             |         | 2,200.0                           |       |
| 34           | Cusco      | AgroMet | Met-1       | Abancay            | Sutron      | MAP Abancay            | 0  | 0           | 0                               | 2,200                        | 0                          | 8,000                                 | 0          | 0          | 1,960         |         | 12,160.0                          |       |
| 35           | Cusco      | AgroMet | Met-1       | Iñapari            | Sutron      | CO Iñapari             | 0  | 0           | 960                             | 2,200                        | 1,500                      | 0                                     | 0          | 2,430      | 0             |         | 7,090.0                           |       |
| 36           | Cusco      | AgroMet | Met-1       | Quillabamba        | Sutron      | CP Quillabamba         | 0  | 0           | 0                               | 2,200                        | 0                          | 8,000                                 | 8,200      | 0          | 0             |         | 18,400.0                          |       |
| 37           | Cusco      | AgroMet | Met-1       | Sicuani            | Sutron      | CO Sicuani             | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 2,430      | 0             |         | 4,630.0                           |       |
| 38           | Puno       | AgroMet | Met-1       | Ayaviri            | Sutron      | CO Ayaviri             | 0  | 0           | 0                               | 2,200                        | 1,500                      | 8,000                                 | 0          | 2,430      | 1,960         |         | 16,090.0                          |       |
| 39           | Lima       | Meteo   | Por definir | Pomabamba          | Por definir | CO-Pomabamba (*)       | 0  | 0           | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         | 25,000  | 40,750.0                          |       |
| 40           | Lima       | Meteo   | Por definir | Isla Pachacamac    | Por definir | CO-Isla Pachacamac (*) | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 0          | 0          | 0             | 25,000  | 27,200.0                          |       |
| 41           | Junin      | Meteo   | Por definir | Huancavelica       | Por definir | CO-Huancavelica (*)    | 0  | 0           | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         | 28,000  | 43,750.0                          |       |
| 42           | Junin      | Meteo   | Por definir | Cerro de Pasco     | Por definir | CO-Cerro de Pasco (*)  | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 8,200      | 0          | 1,960         | 28,000  | 40,360.0                          |       |
| 43           | Cusco      | Meteo   | Por definir | La Quebrada        | Por definir | CO-La Quebrada (*)     | 0  | 0           | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 0             | 28,000  | 41,790.0                          |       |
| 44           | Cusco      | Meteo   | Por definir | Chalhuanca         | Por definir | CO-Chalhuanca (*)      | 0  | 0           | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         | 28,000  | 43,750.0                          |       |
| 45           | Cusco      | Meteo   | Por definir | Pakitzta           | Por definir | CP-Pakitzta (*)        | 0  | 0           | 0                               | 2,200                        | 0                          | 0                                     | 8,200      | 0          | 0             | 28,000  | 38,400.0                          |       |
| 46           | Puno       | Meteo   | Por definir | Carabaya           | Por definir | CO-San Gabán (*)       | 0  | 0           | 960                             | 2,200                        | 0                          | 0                                     | 8,200      | 2,430      | 1,960         | 28,000  | 43,750.0                          |       |
| <b>TOTAL</b> |            |         |             |                    |             |                        | 6,000  | 1,750       | 12,480                          | 92,400                       | 19,500                     | 112,000                               | 131,200    | 53,460     | 47,040        | 218,000 | <b>693,830.0</b>                  |       |

## INFRAESTRUCTURA PARA LAS ESTACIONES METEOROLOGICAS AUTOMATICAS A CORTO PLAZO

| N°               | ESTACION               | DDRR      | INFRAESTRUCTURA (Precio en US \$) |                               | TOTAL            |
|------------------|------------------------|-----------|-----------------------------------|-------------------------------|------------------|
|                  |                        |           | CERCO PERIMETRICO                 | CASETA METEOROLOGICA TIPO "A" |                  |
| 1                | CO-Huarmaca            | Piura     | 1,615.06                          | 271.00                        | 1,886.06         |
| 2                | PLU-Chugur             | Cajamarca | 1,615.06                          | 271.00                        | 1,886.06         |
| 3                | PLU-Quiruvilca         | Cajamarca | 1,615.06                          | 271.00                        | 1,886.06         |
| 4                | PLU-Huaros             | Lima      | 1,615.06                          | 271.00                        | 1,886.06         |
| 5                | EMA-Collique           | Lima      | 1,615.06                          | 271.00                        | 1,886.06         |
| 6                | EMA-Las Palmas         | Lima      | 1,615.06                          | 271.00                        | 1,886.06         |
| 7                | CO-Paucaray            | Ica       | 1,615.06                          | 271.00                        | 1,886.06         |
| 8                | CO-Chivay              | Arequipa  | 1,615.06                          | 271.00                        | 1,886.06         |
| 9                | CO-Sta Clotilde        | Loreto    | 1,615.06                          | 271.00                        | 1,886.06         |
| 10               | CO-Trompeteros         | Loreto    | 1,615.10                          | 271.00                        | 1,886.10         |
| 11               | CO-Iñapari             | Cusco     | 1,615.10                          | 271.00                        | 1,886.10         |
| 39               | CO-Pomabamba (*)       | Lima      | 1,615.10                          | 271.00                        | 1,886.10         |
| 40               | CO-Isla Pachacamac (*) | Lima      | 1,615.10                          | 271.00                        | 1,886.10         |
| 41               | CO-Huancavelica (*)    | Junin     | 1,615.10                          | 271.00                        | 1,886.10         |
| 42               | CO-Cerro de Pasco (*)  | Junin     | 1,615.10                          | 271.00                        | 1,886.10         |
| 43               | CO-La Quebrada (*)     | Cusco     | 1,615.10                          | 271.00                        | 1,886.10         |
| 44               | CO-Chalhuanca (*)      | Cusco     | 1,615.10                          | 271.00                        | 1,886.10         |
| 45               | CP-Pakitza (*)         | Cusco     | 1,871.37                          | 271.00                        | 2,142.37         |
| 46               | CO-San Gabán (*)       | Puno      | 1,615.06                          | 271.00                        | 1,886.06         |
| <b>SUB TOTAL</b> |                        |           | <b>30,942.77</b>                  | <b>5,149.00</b>               | <b>36,091.77</b> |



Finanzas no fueron programadas, siendo oportuno tomarlas en cuenta en este periodo, cuya cantidad de instrumentos se detalla en el cuadro N° 10 y su valorización asciende a la suma de \$ 866,070.00 Dólares Americanos, según el cuadro N° 11, del mismo modo se ha considerado el requerimiento de infraestructura para este grupo de estaciones, el cual se detalla y valoriza en el cuadro N° 12.

Así también, se ha considerado en este periodo aquellas estaciones convencionales que requieren instrumental para contrastar los sensores de las estaciones automáticas marca Davis, Vaisala y Siap que fueron instaladas por la DGIA para fines de investigación dentro de la parcela de una convencional, cuya cantidad de instrumentos se detalla en el cuadro N° 13, y su valorización respectiva asciende a la suma de \$ 133,250.00 Dólares Americanos, según el cuadro N° 14.

También se ha considerado en este periodo financiar el requerimiento de instrumentos de lectura directa y de registro convencionales cuya finalidad sería la de contrastar los sensores de las 17 estaciones hidrológicas automáticas marca Sutron, de acuerdo al detalle indicado en el cuadro N° 15, lo cual asciende a la suma de \$ 355,790.00 Dólares Americanos, según el cuadro N° 16.

Asimismo, es necesario considerar la construcción de toda la infraestructura (cerco perimétrico y caseta meteorológica) para estas 17 estaciones automáticas hidrológicas marca Sutron, lo cual asciende a la suma de \$ 54,406.80 Dólares Americanos de acuerdo al cuadro N° 17; a fin de que la estación convencional esté a la estación automática hidrológica, que fueron financiadas por el Banco Mundial, con la finalidad de contrastar también la información que se obtiene con los sensores de temperatura-humedad, precipitación, velocidad y dirección del viento y nivel de agua.





## REQUERIMIENTO VALORIZADO DE INSTRUMENTAL PARA LA IMPLEMENTACION DE ESTACIONES A MEDIANO PLAZO (SOLICITADO MEDIANTE PROYECTOS DE INVERSIÓN)

Precios en US \$

| N° | ESTACION       | CAT. | PI   | Trabajo a realizarse  | DDRR       | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                             |             |                                 |                        |                              |                     |                        | INSTRUMENTOS DE REGISTRO |                            |            |            |              | TOTAL |             |                 |
|----|----------------|------|------|-----------------------|------------|---------------------------------|----------------------|--------------------|-----------------------------|-------------|---------------------------------|------------------------|------------------------------|---------------------|------------------------|--------------------------|----------------------------|------------|------------|--------------|-------|-------------|-----------------|
|    |                |      |      |                       |            | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO AUGUST | PLUVIÓMETRO JUNTO AL TANQUE | PLUVIOMETRO | TANQUE DE EVAPORACION CLASE "A" | ANEMÓMETRO TOTALIZADOR | ANEMÓMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | JUEGO DE GEOTERMOMETRO | MIRA LIMNIMÉTRICA        | CORRENTÓMETRO Y ACCESORIOS | HELIOGRAFO | ANEMÓGRAFO | EVAPORÍGRAFO |       | PLUVIOGRAFO | TERMOHIGROGRAFO |
| 1  | Virrey         | PLU  | 2008 | Recategorización a CO | Piura      | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 6,585                  | 0                        | 0                          | 0          | 8,200      | 4,260        | 6,850 | 1,980       | 30,055          |
| 2  | Pananga        | PLU  | 2008 | Recategorización a CO | Piura      | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 8,200      | 0            | 6,650 | 1,980       | 25,340          |
| 3  | Huambos        | CP   | 2008 | Equipamiento          | Lambayeque | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 960             |
| 4  | Cutervo        | CO   | 2008 | Equipamiento          | Lambayeque | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 990                 | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 1,950           |
| 5  | Chachapoyas    | CO   | 2008 | Equipamiento          | Lambayeque | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 960             |
| 6  | Chontali       | CO   | 2008 | Equipamiento          | Lambayeque | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 960             |
| 7  | El Palto       | CO   | 2008 | Equipamiento          | Lambayeque | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 6,650 | 0           | 7,610           |
| 8  | Chocope        | CO   | 2008 | Instalación           | Cajamarca  | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490          |
| 9  | Virú           | CO   | 2008 | Instalación           | Cajamarca  | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490          |
| 10 | Condebamba     | CO   | 2008 | Instalación           | Cajamarca  | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490          |
| 11 | Lives          | PLU  | 2008 | Recategorización a CO | Cajamarca  | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140          |
| 12 | Cachachi       | PLU  | 2008 | Recategorización a CO | Cajamarca  | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140          |
| 13 | Puente Chilete | H    | 2007 | Equipamiento          | Cajamarca  | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 0                      | 0                        | 31,000                     | 0          | 0          | 0            | 0     | 0           | 31,000          |
| 14 | Yungay         | CO   | 2007 | Equipamiento          | Lima       | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 1,960       | 5,120           |
| 15 | Copara         | CO   | 2008 | Equipamiento          | Ica        | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 2,200           |
| 16 | Huac Huas      | CO   | 2008 | Equipamiento          | Ica        | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 7,580           |
| 17 | Pauza          | CO   | 2008 | Equipamiento          | Ica        | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 7,580           |
| 18 | Paipa          | CO   | 2007 | Reubicación           | Ica        | 0                               | 0                    | 1,000              | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 1,000           |
| 19 | Chala          | CO   | 2007 | Reubicación           | Ica        | 0                               | 0                    | 1,000              | 0                           | 0           | 960                             | 0                      | 0                            | 990                 | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 2,950           |
| 20 | Córdova        | PLU  | 2007 | Recategorización a CO | Ica        | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490          |
| 21 | La Joya        | MAP  | 2008 | Equipamiento          | Arequipa   | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 2,195                  | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 2,195           |

**CUADRO No 11**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL PARA LA IMPLEMENTACION DE ESTACIONES A MEDIANO PLAZO (SOLICITADO MEDIANTE PROYECTOS DE INVERSIÓN)**

Precios en US \$

| N° | ESTACION             | CAT. | PI   | Trabajo a realizarse  | DDRR     | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                             |             |                                 |                        |                              |                     |                        | INSTRUMENTOS DE REGISTRO |                            |            |            |              | TOTAL |             |               |
|----|----------------------|------|------|-----------------------|----------|---------------------------------|----------------------|--------------------|-----------------------------|-------------|---------------------------------|------------------------|------------------------------|---------------------|------------------------|--------------------------|----------------------------|------------|------------|--------------|-------|-------------|---------------|
|    |                      |      |      |                       |          | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO AUGUST | PLUVIÓMETRO JUNTO AL TANQUE | PLUVIOMETRO | TANQUE DE EVAPORACION CLASE "A" | ANEMÓMETRO TOTALIZADOR | ANEMÓMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | JUEGO DE GEOTERMOMETRO | MIRA LIMNIMÉTRICA        | CORRENTÓMETRO Y ACCESORIOS | HELIOGRAFO | ANEMÓGRAFO | EVAPORÍGRAFO |       | PLUVIOGRAFO | TERMIGROGRAFO |
| 22 | La Haciendita        | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 200                  | 0                  | 200                         | 0           | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 7,950         |
| 23 | Punta Atico          | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 960           |
| 24 | Chuquibamba          | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 1,700                  | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 1,700         |
| 25 | Pulhuay              | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 1,000              | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 1,000         |
| 26 | Cotahuasi            | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 1,700                  | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 2,660         |
| 27 | Cuyau                | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 0                      | 0                        | 31,000                     | 0          | 0          | 0            | 0     | 0           | 31,000        |
| 28 | Salamanca            | CO   | 2008 | Equipamiento          | Arequipa | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 1,700                  | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,850        |
| 29 | Chichas              | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 1,960       | 5,350         |
| 30 | Yanaquihua           | CO   | 2008 | Equipamiento          | Arequipa | 0                               | 0                    | 1,000              | 200                         | 350         | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 8,140         |
| 31 | Chincayllapa         | PLU  | 2007 | Recategorización a CO | Arequipa | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 1,700                  | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 11,840        |
| 32 | Santa Rita de Siguan | CO   | 2007 | Reinstalación         | Arequipa | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 1,700                  | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 12,190        |
| 33 | Hacienda Pampatá     | HLG  | 2007 | Equipamiento          | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 0                      | 0                        | 31,000                     | 0          | 0          | 0            | 0     | 0           | 31,000        |
| 34 | Totorani             | CO   | 2007 | Instalación           | Arequipa | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 1,700                  | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 12,190        |
| 35 | Camaná               | CO   | 2007 | Reubicación           | Arequipa | 0                               | 0                    | 0                  | 0                           | 0           | 960                             | 0                      | 0                            | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 0           | 960           |
| 36 | Cairani              | PE   | 2008 | Recategorización a CO | Tacna    | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 0     | 1,960       | 6,720         |
| 37 | Talabaya             | PE   | 2008 | Recategorización a CO | Tacna    | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140        |
| 38 | Calacoa              | PE   | 2008 | Recategorización a CO | Tacna    | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140        |
| 39 | Toquela              | PE   | 2008 | Recategorización a CO | Tacna    | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140        |
| 40 | Calientes            | PE   | 2007 | Recategorización a CO | Tacna    | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,140        |
| 41 | Santa María de Nanay | PLU  | 2008 | Recategorización a CO | Loreto   | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490        |
| 42 | Saqn Regis           | PLU  | 2008 | Recategorización a CO | Loreto   | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 1,960       | 10,490        |



**CUADRO No 11**  
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Precios en US \$

| N° | ESTACION      | CAT. | PI   | Trabajo a realizarse  | DDRR       | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                             |             |                                 |                        |                              |                     |                        | INSTRUMENTOS DE REGISTRO |                            |            |            |              | TOTAL |             |
|----|---------------|------|------|-----------------------|------------|---------------------------------|----------------------|--------------------|-----------------------------|-------------|---------------------------------|------------------------|------------------------------|---------------------|------------------------|--------------------------|----------------------------|------------|------------|--------------|-------|-------------|
|    |               |      |      |                       |            | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO AUGUST | PLUVIÓMETRO JUNTO AL TANQUE | PLUVIOMETRO | TANQUE DE EVAPORACION CLASE "A" | ANEMÓMETRO TOTALIZADOR | ANEMÓMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | JUEGO DE GEOTERMOMETRO | MIRA LIMNIMÉTRICA        | CORRENTÓMETRO Y ACCESORIOS | HELIOGRAFO | ANEMÓGRAFO | EVAPORÍGRAFO |       | PLUVIÓGRAFO |
| 43 | Tamanco       | HLM  | 2007 | Instalación           | Loreto     | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 840                 | 0                      | 0                        | 0                          | 0          | 0          | 840          |       |             |
| 44 | Jepelacio     | PLU  | 2008 | Recategorización a CO | San Martín | 0                               | 0                    | 0                  | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 8,740       |
| 45 | Pelejo        | PLU  | 2008 | Recategorización a CO | San Martín | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,140      |
| 46 | Chazuta       | PLU  | 2007 | Recategorización a CO | San Martín | 200                             | 200                  | 1,000              | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,140      |
| 47 | Pachiza       | CO   | 2007 | Equipamiento          | San Martín | 0                               | 0                    | 0                  | 200                         | 0           | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 0     | 6,780       |
| 48 | Tulumayo      | MAP  | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 6,585                  | 0                        | 0                          | 2,430      | 0          | 4,260        | 0     | 13,275      |
| 49 | Tananta       | CP   | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 1,000              | 0                           | 700         | 0                               | 0                      | 0                            | 0                   | 6,585                  | 0                        | 0                          | 2,430      | 0          | 0            | 6,650 | 19,325      |
| 50 | Chagla        | CO   | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 4,390                  | 0                        | 0                          | 2,430      | 0          | 0            | 6,650 | 17,830      |
| 51 | Dos de Mayo   | CO   | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 6,650 | 13,440      |
| 52 | San Alejandro | CO   | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 700         | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 8,450       |
| 53 | Tournavista   | CO   | 2008 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 7,750       |
| 54 | Puerto Inca   | CP   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 4,390                  | 0                        | 0                          | 0          | 0          | 0            | 6,650 | 15,400      |
| 55 | Tingo María   | CP   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 0                           | 0           | 0                               | 0                      | 0                            | 0                   | 4,390                  | 0                        | 0                          | 0          | 0          | 0            | 0     | 4,390       |
| 56 | Huarica       | CO   | 2007 | Instalación           | Huánuco    | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,490      |
| 57 | Cachicoto     | CO   | 2007 | Instalación           | Huánuco    | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,490      |
| 58 | Masisea       | CO   | 2007 | Instalación           | Huánuco    | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,490      |
| 59 | Liata         | CO   | 2007 | Instalación           | Huánuco    | 200                             | 200                  | 1,000              | 200                         | 350         | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 10,490      |
| 60 | Aguaytía      | CO   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 0          | 0          | 0            | 1,960 | 4,360       |
| 61 | La Divisoria  | CO   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 6,790       |
| 62 | El Maronal    | CO   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 6,790       |
| 63 | Canchan       | CO   | 2007 | Equipamiento          | Huánuco    | 0                               | 0                    | 0                  | 200                         | 0           | 0                               | 0                      | 2,200                        | 990                 | 0                      | 0                        | 0                          | 2,430      | 0          | 0            | 1,960 | 7,780       |

**CUADRO No 11**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL PARA LA IMPLEMENTACION DE ESTACIONES A MEDIANO PLAZO (SOLICITADO MEDIANTE PROYECTOS DE INVERSIÓN)**

Precios en US \$

| N°                    | ESTACION          | CAT. | PI   | Trabajo a realizarse        | DDRR  | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                             |              |                                 |                        |                              |                     |                        |                   | INSTRUMENTOS DE REGISTRO   |                |               |               |                | TOTAL          |                 |
|-----------------------|-------------------|------|------|-----------------------------|-------|---------------------------------|----------------------|--------------------|-----------------------------|--------------|---------------------------------|------------------------|------------------------------|---------------------|------------------------|-------------------|----------------------------|----------------|---------------|---------------|----------------|----------------|-----------------|
|                       |                   |      |      |                             |       | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO AUGUST | PLUVIÓMETRO JUNTO AL TANQUE | PLUVIOMETRO  | TANQUE DE EVAPORACION CLASE "A" | ANEMÓMETRO TOTALIZADOR | ANEMÓMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | JUEGO DE GEOTERMOMETRO | MIRA LIMNIMÉTRICA | CORRENTÓMETRO Y ACCESORIOS | HELIOGRAFO     | ANEMÓGRAFO    | EVAPORIGRAFO  | PLUVIÓGRAFO    |                | TERMOHIGROGRAFO |
| 64                    | Acostambo         | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 1,000              | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 0              | 16,740          |
| 65                    | Colcabamba        | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 1,000              | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 1,960          | 19,660          |
| 66                    | Huancalpi         | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 1,960          | 17,700          |
| 67                    | Huanta            | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 1,000              | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 1,960          | 18,700          |
| 68                    | Pichanaki         | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 0              | 0             | 4,260         | 6,650          | 1,960          | 15,270          |
| 69                    | Salcabamba        | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 1,000              | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 1,960          | 19,660          |
| 70                    | San Juan de Jarpa | CO   | 2008 | Reubicación/Equipamiento    | Junín | 0                               | 0                    | 1,000              | 200                         | 350          | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 4,260         | 6,650          | 1,960          | 20,010          |
| 71                    | Challabamba       | CO   | 2008 | Rehabilitación/Equipamiento | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 0              | 0             | 0             | 0              | 1,960          | 5,320           |
| 72                    | Iñapari           | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 0                            | 0                   | 0                      | 0                 | 0                          | 0              | 0             | 0             | 6,650          | 0              | 6,650           |
| 73                    | Pomacanchi        | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 6,790           |
| 74                    | Santo Tomás       | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 6,790           |
| 75                    | Ccatcca           | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 7,750           |
| 76                    | Tambobamba        | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 990                 | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 8,740           |
| 77                    | Colquepata        | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 7,750           |
| 78                    | Pisac             | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 0              | 1,960          | 7,750           |
| 79                    | Salvación         | CP   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 1,000              | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 4,390                  | 0                 | 0                          | 2,430          | 8,200         | 0             | 6,650          | 0              | 25,070          |
| 80                    | Quincemil         | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 960                             | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 2,430          | 0             | 0             | 6,650          | 0              | 12,440          |
| 81                    | Acomayo           | CO   | 2008 | Equipamiento                | Cusco | 0                               | 0                    | 0                  | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 0                      | 0                 | 0                          | 0              | 0             | 0             | 0              | 1,960          | 4,360           |
| 82                    | Urubamba          | CP   | 2007 | Reubicación                 | Cusco | 0                               | 0                    | 1,000              | 200                         | 0            | 0                               | 0                      | 2,200                        | 0                   | 4,390                  | 0                 | 0                          | 0              | 0             | 0             | 0              | 0              | 7,790           |
| 83                    | Rio Ayaviri       | HLG  | 2007 | Equipamiento                | Puno  | 0                               | 0                    | 0                  | 0                           | 0            | 0                               | 0                      | 0                            | 0                   | 0                      | 0                 | 31,000                     | 0              | 0             | 0             | 0              | 0              | 31,000          |
| <b>TOTAL CANTIDAD</b> |                   |      |      |                             |       | <b>4,800</b>                    | <b>5,000</b>         | <b>38,000</b>      | <b>11,600</b>               | <b>6,650</b> | <b>46,080</b>                   | <b>10,200</b>          | <b>134,200</b>               | <b>30,690</b>       | <b>43,900</b>          | <b>840</b>        | <b>124,000</b>             | <b>126,360</b> | <b>24,600</b> | <b>38,340</b> | <b>113,050</b> | <b>109,760</b> | <b>866,070</b>  |

CUADRO No 12

REQUERIMIENTO DE INFRAESTRUCTURA PARA IMPLEMENTACION DE ESTACIONES DEL P.I. A MEDIANO PLAZO (Requerido mediante proyectos de Inversión)

| N° | ESTACION             | CAT. | PI   | Trabajo a realizarse  | DDRR       | REQUERIM. DE INFRAESTRUCTURA |                      | REQUERIM. VALORIZADO DE INFRAESTRUCTURA |                      | TOTAL US \$ |
|----|----------------------|------|------|-----------------------|------------|------------------------------|----------------------|---|----------------------|-------------|
|    |                      |      |      |                       |            | CERCO PERIMÉTRICO            | CASETA METEOROLÓGICA | CERCO PERIMÉTRICO                       | CASETA METEOROLÓGICA |             |
| 1  | Virrey               | PLU  | 2008 | Recategorización a CO | Piura      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 2  | Pananga              | PLU  | 2008 | Recategorización a CO | Piura      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 3  | Chocope              | CO   | 2008 | Instalación           | Cajamarca  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 4  | Virú                 | CO   | 2008 | Instalación           | Cajamarca  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 5  | Condebamba           | CO   | 2008 | Instalación           | Cajamarca  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 6  | Lives                | PLU  | 2008 | Recategorización a CO | Cajamarca  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 7  | Cachachi             | PLU  | 2008 | Recategorización a CO | Cajamarca  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 8  | Palpa                | CO   | 2007 | Reubicación           | Ica        | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 9  | Chala                | CO   | 2007 | Reubicación           | Ica        | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 10 | Córdova              | PLU  | 2007 | Recategorización a CO | Ica        | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 11 | Ubinas               | CO   | 2008 | Reubicación           | Arequipa   | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1     |
| 12 | Chincayllapa         | PLU  | 2007 | Recategorización a CO | Arequipa   | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 13 | La Haciendita        | CO   | 2007 | Reubicación           | Arequipa   | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1     |
| 14 | Santa Rita de Sigwas | CO   | 2007 | Reinstalación         | Arequipa   | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 15 | Totorani             | CO   | 2007 | Instalación           | Arequipa   | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 16 | Sumbay               | CO   | 2007 | Reubicación           | Arequipa   | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1     |
| 17 | Camaná               | CO   | 2007 | Reubicación           | Arequipa   | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1     |
| 18 | Cairani              | PE   | 2008 | Recategorización a CO | Tacna      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 19 | Talabaya             | PE   | 2008 | Recategorización a CO | Tacna      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 20 | Calacoa              | PE   | 2008 | Recategorización a CO | Tacna      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 21 | Toquela              | PE   | 2008 | Recategorización a CO | Tacna      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 22 | Calientes            | PE   | 2007 | Recategorización a CO | Tacna      | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 23 | Santa María de Nanay | PLU  | 2008 | Recategorización a CO | Loreto     | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 24 | Saqa Regis           | PLU  | 2008 | Recategorización a CO | Loreto     | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 25 | Jepelacio            | PLU  | 2008 | Recategorización a CO | San Martín | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 26 | Pelejo               | PLU  | 2008 | Recategorización a CO | San Martín | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 27 | Chazuta              | PLU  | 2007 | Recategorización a CO | San Martín | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 28 | Huarica              | CO   | 2007 | Instalación           | Huánuco    | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 29 | Cachicoto            | CO   | 2007 | Instalación           | Huánuco    | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 30 | Masisea              | CO   | 2007 | Instalación           | Huánuco    | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |
| 31 | Llata                | CO   | 2007 | Instalación           | Huánuco    | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1     |

CUADRO No 12

REQUERIMIENTO DE INFRAESTRUCTURA PARA IMPLEMENTACION DE ESTACIONES DEL P.I. A MEDIANO PLAZO (Requerido mediante proyectos de Inversión)

| N°                    | ESTACION          | CAT. | PI   | Trabajo a realizarse        | DDRR  | REQUERIM. DE INFRAESTRUCTURA |                      | REQUERIM. VALORIZADO DE INFRAESTRUCTURA |                      | TOTAL US \$     |
|-----------------------|-------------------|------|------|-----------------------------|-------|------------------------------|----------------------|---|----------------------|-----------------|
|                       |                   |      |      |                             |       | CERCO PERIMÉTRICO            | CASETA METEOROLÓGICA | CERCO PERIMÉTRICO                       | CASETA METEOROLÓGICA |                 |
| 32                    | Acostambo         | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 33                    | Colcabamba        | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 34                    | Huancalpi         | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 35                    | Huanta            | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 36                    | Pichanaki         | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 37                    | Salcabamba        | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 38                    | San Juan de Jarpa | CO   | 2008 | Reubicación/Equipamiento    | Junin | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 39                    | Chalhuanca        | CO   | 2008 | Rehabilitación              | Cusco | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1         |
| 40                    | Challabamba       | CO   | 2008 | Rehabilitación/Equipamiento | Cusco | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1         |
| 41                    | Urubamba          | CP   | 2007 | Reubicación                 | Cusco | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 42                    | Ollachea          | CO   | 2008 | Rehabilitación              | Puno  | 1                            |                      | 1,615.1                                 | 0.0                  | 1,615.1         |
| 43                    | Lampa             | CO   | 2008 | Rehabilitación              | Puno  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| 44                    | Pampahuta         | CO   | 2008 | Rehabilitación              | Puno  | 1                            | 1                    | 1,615.1                                 | 271.0                | 1,886.1         |
| <b>TOTAL CANTIDAD</b> |                   |      |      |                             |       | <b>44</b>                    | <b>37</b>            | <b>71,062.6</b>                         | <b>10,027.0</b>      | <b>81,089.6</b> |

## REQUERIMIENTO DE INSTRUMENTAL DE ESTACIONES METEOROLOGICAS AUTOMATICAS A MEDIANO PLAZO (Para contraste con EMA)

| N°           | DDRR's     | TIPO    | MODELO      | ESTACION           | MARCA   | ESTACION CONVENCIONAL | ESTACION CONVENCIONAL                        |             |                                 |                              |                                       |            |            |
|--------------|------------|---------|-------------|--------------------|---------|-----------------------|--|-------------|---------------------------------|------------------------------|---------------------------------------|------------|------------|
|              |            |         |             |                    |         |                       | INSTRUMENTOS DE LECTURA DIRECTA QUE REQUIERE |             |                                 |                              | INSTRUMENTOS DE REGISTRO QUE REQUIERE |            |            |
|              |            |         |             |                    |         |                       | PSICROMETRO AUGUST                           | PLUVIOMETRO | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO A NIVEL DE TANQUE | ANEMOGRAFO                            | HELIOGRAFO | TERMOMETRO |
| 1            | Tacna      | AgroMet | GroWeather  | U. Basadre         | Davis   | CP La Yarada          |  |             |                                 | 1                            | 1                                     | 1          | 1          |
| 2            | Loreto     | Meteo   | Monitor     | Iquitos            | Davis   | Of. DR (CO-Amazonas)  |  |             |                                 | 1                            |                                       | 1          | 1          |
| 3            | Junín      | AgroMet | GroWeather  | Santa Ana          | Davis   | MAP Sta Ana           |  |             |                                 | 1                            |                                       |            |            |
| 4            | Piura      | Meteo   | Energy      | Miraflores         | Davis   | MAP Miraflores        |  |             |                                 |                              |                                       |            |            |
| 5            | Lambayeque | Meteo   | Energy      | Ferreñafe          | Davis   | CO Ferreñafe          |  |             |                                 | 1                            | 1                                     |            | 1          |
| 6            | Cajamarca  | Meteo   | Energy      | Augusto Weberbauer | Davis   | MAP A. Weberbauer     |  |             |                                 |                              |                                       |            | 1          |
| 7            | Lima       | Meteo   | Energy      | Estación Movil 1   | Davis   | Sin Est. Conv.        |  |             |                                 |                              |                                       |            |            |
| 8            | Lima       | Meteo   | Energy      | Estacion Movil 2   | Davis   | Sin Est. Conv.        |  |             |                                 |                              |                                       |            |            |
| 9            | Ica        | Meteo   | Energy      | San Camilo         | Davis   | Map San Camilo        |  |             |                                 |                              |                                       |            | 1          |
| 10           | Arequipa   | Meteo   | Energy      | La Joya            | Davis   | MAP La Joya           |  |             | 1                               | 1                            |                                       |            |            |
| 11           | Arequipa   | Meteo   | Energy      | La Pampilla        | Davis   | MAP La Pampilla       |  |             |                                 |                              |                                       |            | 1          |
| 12           | Huánuco    | Meteo   | Energy      | Huanuco            | Davis   | CP Huanuco            |  |             |                                 |                              |                                       |            | 1          |
| 13           | Cusco      | Meteo   | Energy      | Granja Kcayra      | Davis   | MAP G. Kcayra         |  |             |                                 | 1                            |                                       |            |            |
| 14           | Puno       | Meteo   | Energy      | Juli               | Davis   | CO Juli               | 1  | 1           |                                 | 1                            | 1                                     | 1          | 1          |
| 15           | Tacna      | Meteo   | Met         | Tarata             | Vaisala | CO Tarata             |  |             |                                 | 1                            | 1                                     | 1          | 1          |
| 16           | Lima       | Meteo   | Met         | Las Palmas         | Siap    | Sin Est. Conv.        | 1  | 1           |                                 | 1                            | 1                                     | 1          | 1          |
| 17           | Lima       | Meteo   | Met         | Collique           | Siap    | Sin Est. Conv.        | 1  | 1           |                                 | 1                            | 1                                     | 1          | 1          |
| 18           | Cusco      | AgroMet | GroWeather  | Urubamba           | Davis   | CO Urubamba           | 1  |             |                                 | 1                            |                                       |            |            |
| 19           | Cusco      | AgroMet | Vantage Pro | Cay Cay            | Davis   | CO Cay Cay            |  | 1           | 1                               | 1                            | 1                                     | 1          | 1          |
| <b>TOTAL</b> |            |         |             |                    |         |                       | <b>4</b>                                     | <b>4</b>    | <b>2</b>                        | <b>9</b>                     | <b>8</b>                              | <b>7</b>   | <b>12</b>  |

CUADRO N° 14  
VALORIZADO DEL REQUERIMIENTO DE INSTRUMENTAL A MEDIANO PLAZO (Para contraste con EMA)

| N°           | DDRR's     | TIPO    | MODELO      | ESTACION           | MARCA   | ESTACION CONVENCIONAL  | ESTACION CONVENCIONAL                        |                |                                 |                              |                                       |                 | TOTAL           |                  |
|--------------|------------|---------|-------------|--------------------|---------|------------------------|--|----------------|---------------------------------|------------------------------|---------------------------------------|-----------------|-----------------|------------------|
|              |            |         |             |                    |         |                        | INSTRUMENTOS DE LECTURA DIRECTA QUE REQUIERE |                |                                 |                              | INSTRUMENTOS DE REGISTRO QUE REQUIERE |                 |                 |                  |
|              |            |         |             |                    |         |                        | PSICROMETRO AUGUST                           | PLUVIOMETRO    | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO A NIVEL DE TANQUE | ANEMOGRAFO                            | HELIOGRAFO      |                 | TERMOCIGROGRAFO  |
| 1            | Tacna      | AgroMet | GroWeather  | U. Basadre         | Davis   | CP-La Yarada           | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 8,200.0                               | 2,430.0         | 1,960.0         | 14,790.0         |
| 2            | Loreto     | Meteo   | Monitor     | Iquitos            | Davis   | Of. DR (CO-Amazonas)   | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 0.0                                   | 2,430.0         | 1,960.0         | 6,590.0          |
| 3            | Junín      | AgroMet | GroWeather  | Santa Ana          | Davis   | MAP-Santa Ana          | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 0.0                                   | 0.0             | 0.0             | 2,200.0          |
| 4            | Piura      | Meteo   | Energy      | Miraflores         | Davis   | MAP-Miraflores         | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 0.0             | 0.0              |
| 5            | Lambayeque | Meteo   | Energy      | Ferreñafe          | Davis   | CO-Ferreñafe           | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 8,200.0                               | 0.0             | 1,960.0         | 12,360.0         |
| 6            | Cajamarca  | Meteo   | Energy      | Augusto Weberbauer | Davis   | MAP-Augusto Weberbauer | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 1,960.0         | 1,960.0          |
| 7            | Lima       | Meteo   | Energy      | Estación Movil 1   | Davis   | Sin Est. Conv.         | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 0.0             | 0.0              |
| 8            | Lima       | Meteo   | Energy      | Estacion Movil 2   | Davis   | Sin Est. Conv.         | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 0.0             | 0.0              |
| 9            | Ica        | Meteo   | Energy      | San Camilo         | Davis   | MAP-San Camilo         | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 1,960.0         | 1,960.0          |
| 10           | Arequipa   | Meteo   | Energy      | La Joya            | Davis   | MAP-La Joya            | 0.0  | 0.0            | 960.0                           | 0.0                          | 8,200.0                               | 0.0             | 0.0             | 9,160.0          |
| 11           | Arequipa   | Meteo   | Energy      | La Pampilla        | Davis   | MAP-La Pampilla        | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 1,960.0         | 1,960.0          |
| 12           | Huánuco    | Meteo   | Energy      | Huanuco            | Davis   | CP-Huanuco             | 0.0  | 0.0            | 0.0                             | 0.0                          | 0.0                                   | 0.0             | 1,960.0         | 1,960.0          |
| 13           | Cusco      | Meteo   | Energy      | Granja Kcayra      | Davis   | MAP-Granja Kcayra      | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 0.0                                   | 0.0             | 0.0             | 2,200.0          |
| 14           | Puno       | Meteo   | Energy      | Juli               | Davis   | CO-Juli                | 1,000.0                                      | 350.0          | 0.0                             | 2,200.0                      | 8,200.0                               | 2,430.0         | 1,960.0         | 16,140.0         |
| 15           | Tacna      | Meteo   | Met         | Tarata             | Vaisala | CO-Tarata              | 0.0  | 0.0            | 0.0                             | 2,200.0                      | 8,200.0                               | 2,430.0         | 1,960.0         | 14,790.0         |
| 16           | Lima       | Meteo   | Met         | Las Palmas         | Siap    | Sin Est. Conv.         | 1,000.0                                      | 350.0          | 0.0                             | 0.0                          | 8,200.0                               | 2,430.0         | 1,960.0         | 13,940.0         |
| 17           | Lima       | Meteo   | Met         | Collique           | Siap    | Sin Est. Conv.         | 1,000.0                                      | 350.0          | 0.0                             | 0.0                          | 8,200.0                               | 2,430.0         | 1,960.0         | 13,940.0         |
| 18           | Cusco      | AgroMet | GroWeather  | Urubamba           | Davis   | CP-Urubamba            | 1,000.0                                      | 0.0            | 0.0                             | 2,200.0                      | 0.0                                   | 0.0             | 0.0             | 3,200.0          |
| 19           | Cusco      | AgroMet | Vantage Pro | Caicay             | Davis   | CO-Cay Cay             | 0.0  | 350.0          | 960.0                           | 2,200.0                      | 8,200.0                               | 2,430.0         | 1,960.0         | 16,100.0         |
| <b>TOTAL</b> |            |         |             |                    |         |                        | <b>4,000.0</b>                               | <b>1,400.0</b> | <b>1,920.0</b>                  | <b>19,800.0</b>              | <b>65,600.0</b>                       | <b>17,010.0</b> | <b>23,520.0</b> | <b>133,250.0</b> |

**CUADRO N° 15**  
**REQUERIMIENTO DE INSTRUMENTAL PARA ESTACIONES HIDROLOGICAS AUTOMATICAS AL MEDIANO PLAZO (Para**  
**contraste con EHA)**

| N°           | DDRR's     | TIPO  | ESTACION       | MARCA  | ESTACION CONVENCIONAL | ESTACION CONVENCIONAL                                   |             |                        |                            |            |            |             |             |   |
|--------------|------------|-------|----------------|--------|-----------------------|---|-------------|------------------------|----------------------------|------------|------------|-------------|-------------|---|
|              |            |       |                |        |                       | INSTRUMENTOS DE LECTURA DIRECTA Y REGISTRO QUE REQUIERE |             |                        |                            |            |            |             |             |   |
|              |            |       |                |        |                       | PSICROMETRO ASSMAN                                      | PLUVIOMETRO | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | LIMNIGRAFO | ANEMOGRAFO | PLUVIOGRAFO | TERMIGRGAFO |   |
| 1            | Piura      | Hidro | El Ciruelo     | Sutron | Sin Est. Conv.        | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 2            | Piura      | Hidro | El Tigre       | Sutron | H El tigre            | 1   | 1           | 4                      |                            | 1          | 1          | 1           | 1           | 1 |
| 3            | Piura      | Hidro | Pte. Ñacara    | Sutron | H Ñacara              | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 4            | Lambayeque | Hidro | Cirato         | Sutron | H Cirato              | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 5            | Cajamarca  | Hidro | Balsas         | Sutron | Sin Est. Conv.        | 1   | 1           |                        |                            |            | 1          | 1           | 1           | 1 |
| 6            | Cajamarca  | Hidro | Pte. Chilete   | Sutron | H Chilete             | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 7            | Lima       | Hidro | Chosica        | Sutron | H Chosica             | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 8            | Lima       | Hidro | Pte. Magdalena | Sutron | H Magdalena           | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 9            | Lima       | Hidro | Sayán          | Sutron | H Sayan               | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 10           | Ica        | Hidro | Letrayoc       | Sutron | H Letrayoc            | 1   | 1           |                        | 1                          |            | 1          |             |             | 1 |
| 11           | Arequipa   | Hidro | Ocoña          | Sutron | H Ocoña               | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 12           | Loreto     | Hidro | Enapu Perú     | Sutron | H Enapu Peru          | 1   | 1           |                        |                            | 1          | 1          | 1           | 1           | 1 |
| 13           | Huánuco    | Hidro | Tocache        | Sutron | H Tocache             | 1   | 1           |                        | 1                          | 1          | 1          | 1           | 1           | 1 |
| 14           | Huánuco    | Hidro | Tingo maria    | Sutron | H Tingo Maria         | 1   | 1           |                        |                            |            | 1          |             |             | 1 |
| 15           | Cusco      | Hidro | Pisac          | Sutron | H Pisac               | 1   | 1           | 3                      |                            |            | 1          |             |             | 1 |
| 16           | Puno       | Hidro | Enafer         | Sutron | H Enafer              | 1   | 1           |                        |                            | 1          | 1          | 1           | 1           | 1 |
| 17           | Puno       | Hidro | Pte. Carretera | Sutron | H Ramis               | 1   | 1           | 2                      | 1                          |            | 1          |             |             | 1 |
| <b>TOTAL</b> |            |       |                |        |                       | <b>17</b>   | <b>17</b>   | <b>9</b>               | <b>3</b>                   | <b>4</b>   | <b>17</b>  | <b>5</b>    | <b>17</b>   |   |

**CUADRO N° 16**  
**REQUERIMIENTO DE INSTRUMENTAL CONVENCIONAL AL MEDIANO PLAZO (Para contraste con EHA)**

| N°                 | DDRR's     | ESTACION       | MARCA  | ESTACION CONVENCIONAL | INSTRUMENTOS DE LECTURA DIRECTA Y REGISTRO |              |                         |                            |               |                |               |                 | TOTAL (US \$)     |
|--------------------|------------|----------------|--------|-----------------------|--|--------------|-------------------------|----------------------------|---------------|----------------|---------------|-----------------|-------------------|
|                    |            |                |        |                       | QUE REQUIERE                               |              |                         |                            |               |                |               |                 |                   |
|                    |            |                |        |                       | PSICROMETRO ASSMAN                         | PLUVIOMETRO  | MIRA LIMINIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | LIMINGRAFO    | ANEMOGRAFO     | PLUVIOGRAFO   | TERMOHIGROGRAFO |                   |
| 1                  | Piura      | El Ciruelo     | Sutron | Sin Est. Conv.        | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 2                  | Piura      | El Tigre       | Sutron | H El tigre            | 1,500                                      | 350          | 280                     | 0                          | 6,185         | 8,200          | 6,650         | 1,960           | 25,125            |
| 3                  | Piura      | Pte. Ñacara    | Sutron | H Ñacara              | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 4                  | Lambayeque | Cirato         | Sutron | H Cirato              | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 5                  | Cajamarca  | Balsas         | Sutron | Sin Est. Conv.        | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 6,650         | 1,960           | 18,660            |
| 6                  | Cajamarca  | Pte. Chilete   | Sutron | H Chilete             | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 7                  | Lima       | Chosica        | Sutron | H Chosica             | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 8                  | Lima       | Pte. Magdalena | Sutron | H Magdalena           | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 9                  | Lima       | Sayán          | Sutron | H Sayan               | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 10                 | Ica        | Letrayoc       | Sutron | H Letrayoc            | 1,500                                      | 350          | 0                       | 31,000                     | 0             | 8,200          | 0             | 1,960           | 43,010            |
| 11                 | Arequipa   | Ocoña          | Sutron | H Ocoña               | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 12                 | Loreto     | Enapu Perú     | Sutron | H Enapu Peru          | 1,500                                      | 350          | 0                       | 0                          | 6,185         | 8,200          | 6,650         | 1,960           | 24,845            |
| 13                 | Huánuco    | Tocache        | Sutron | H Tocache             | 1,500                                      | 350          | 0                       | 31,000                     | 6,185         | 8,200          | 6,650         | 1,960           | 55,845            |
| 14                 | Huánuco    | Tingo maria    | Sutron | H Tingo Maria         | 1,500                                      | 350          | 0                       | 0                          | 0             | 8,200          | 0             | 1,960           | 12,010            |
| 15                 | Cusco      | Pisac          | Sutron | H Pisac               | 1,500                                      | 350          | 210                     | 0                          | 0             | 8,200          | 0             | 1,960           | 12,220            |
| 16                 | Puno       | Enafer         | Sutron | H Enafer              | 1,500                                      | 350          | 0                       | 0                          | 6,185         | 8,200          | 6,650         | 1,960           | 24,845            |
| 17                 | Puno       | Pte. Carretera | Sutron | H Ramis               | 1,500                                      | 350          | 140                     | 31,000                     | 0             | 8,200          | 0             | 1,960           | 43,150            |
| <b>TOTAL US \$</b> |            |                |        |                       | <b>25,500</b>                              | <b>5,950</b> | <b>630</b>              | <b>93,000</b>              | <b>24,740</b> | <b>139,400</b> | <b>33,250</b> | <b>33,320</b>   | <b>355,790.00</b> |



**CUADRO N° 17**  
**REQUERIMIENTO DE INFRAESTRUCTURA ESTACIONES HIDROLOGICAS AUTOMATICAS AL MEDIANO PLAZO**

| N°                 | DDRR's     | TIPO  | ESTACION       | MARCA  | ESTACION CONVENCIONAL | CERCO PERIMETRICO COMPLETO | CASETA METEOROLOGICA TIPO "A" | VIATICOS Y PASAJES | TOTAL            |
|--------------------|------------|-------|----------------|--------|-----------------------|----------------------------|-------------------------------|--------------------|------------------|
| 1                  | Piura      | Hidro | El Ciruelo     | Sutron | Sin Est. Conv.        | 1,687.4                    | 271.0                         | 1,226.0            | 3,184.4          |
| 2                  | Piura      | Hidro | El Tigre       | Sutron | H El tigre            | 1,688.4                    | 272.0                         | 1,226.0            | 3,186.4          |
| 3                  | Piura      | Hidro | Pte. Ñacara    | Sutron | H Ñacara              | 1,689.4                    | 273.0                         | 1,226.0            | 3,188.4          |
| 4                  | Lambayeque | Hidro | Cirato         | Sutron | H Cirato              | 1,690.4                    | 274.0                         | 1,226.0            | 3,190.4          |
| 5                  | Cajamarca  | Hidro | Balsas         | Sutron | Sin Est. Conv.        | 1,691.4                    | 275.0                         | 1,226.0            | 3,192.4          |
| 6                  | Cajamarca  | Hidro | Pte. Chilete   | Sutron | H Chilete             | 1,692.4                    | 276.0                         | 1,226.0            | 3,194.4          |
| 7                  | Lima       | Hidro | Chosica        | Sutron | H Chosica             | 1,693.4                    | 277.0                         | 1,226.0            | 3,196.4          |
| 8                  | Lima       | Hidro | Pte. Magdalena | Sutron | H Magdalena           | 1,694.4                    | 278.0                         | 1,226.0            | 3,198.4          |
| 9                  | Lima       | Hidro | Sayán          | Sutron | H Sayan               | 1,695.4                    | 279.0                         | 1,226.0            | 3,200.4          |
| 10                 | Ica        | Hidro | Letrayoc       | Sutron | H Letrayoc            | 1,696.4                    | 280.0                         | 1,226.0            | 3,202.4          |
| 11                 | Arequipa   | Hidro | Ocoña          | Sutron | H Ocoña               | 1,697.4                    | 281.0                         | 1,226.0            | 3,204.4          |
| 12                 | Loreto     | Hidro | Enapu Perú     | Sutron | H Enapu Peru          | 1,698.4                    | 282.0                         | 1,226.0            | 3,206.4          |
| 13                 | Huánuco    | Hidro | Tocache        | Sutron | H Tocache             | 1,699.4                    | 283.0                         | 1,226.0            | 3,208.4          |
| 14                 | Huánuco    | Hidro | Tingo maria    | Sutron | H Tingo Maria         | 1,700.4                    | 284.0                         | 1,226.0            | 3,210.4          |
| 15                 | Cusco      | Hidro | Pisac          | Sutron | H Pisac               | 1,701.4                    | 285.0                         | 1,226.0            | 3,212.4          |
| 16                 | Puno       | Hidro | Enafer         | Sutron | H Enafer              | 1,702.4                    | 286.0                         | 1,226.0            | 3,214.4          |
| 17                 | Puno       | Hidro | Pte. Carretera | Sutron | H Ramis               | 1,703.4                    | 287.0                         | 1,226.0            | 3,216.4          |
| <b>TOTAL US \$</b> |            |       |                |        |                       | <b>28,821.8</b>            | <b>4,472.0</b>                | <b>20,842.0</b>    | <b>54,406.80</b> |



Asimismo, en el cuadro N° 18 se detalla a todas aquellas estaciones que requieren mejoramiento en su infraestructura; es decir reemplazo de su caseta meteorológica y la renovación del cerco perimétrico completo, que en la actualidad presentan deterioro, lo cual demanda contar con un financiamiento de \$ 97,294.73 Dólares Americanos.

Finalmente, se ha considerado en este periodo reubicar algunas estaciones meteorológicas que presentan problemas de accesibilidad y mala ubicación que hacen que hayan perdido representatividad, lo cual se puede apreciar en el cuadro N° 19, lo cual demanda contar con un financiamiento de \$ 74,508.38 Dólares Americanos.

Sin embargo, cabe mencionar que la Dirección General de Hidrología presentó un Plan de reubicación de 20 estaciones hidrológicas ver cuadro N° 20, las cuales han perdido representatividad en el tiempo y sus secciones transversales no son las más adecuadas para determinar el nivel y caudal bajo un régimen natural del río, cuyo financiamiento se determinará a través de una evaluación de las condiciones hidráulicas del río para calcular el monto económico.

De acuerdo al resumen que se presenta a continuación, se puede determinar la cantidad de dinero que se requiere para cubrir la demanda de instrumentos, según el detalle:

| <u>Actividad</u>                                       | <u>Financiamiento</u>  |
|--|------------------------|
| Equipamiento de instrumental convencional PI '07 y '08 | 866,070.00             |
| Infraestructura requerida PI '07 y '08                 | 81,089.64              |
| Equipamiento de instrumental para contraste EMA        | 133,250.00             |
| Equipamiento de instrumental para contraste EHA        | 355,790.00             |
| Mejoramiento de infraestructura para contraste EHA     | 54,406.80              |
| Mejoramiento de infraestructura en general             | 97,294.73              |
| Reubicación de estaciones convencionales               | <u>9274,508.38</u>     |
|  | <b>\$ 1,662,409.55</b> |

CUADRO N° 18  
REQUERIMIENTO DE INFRAESTRUCTURA EN GENERAL AL MEDIANO PLAZO

| N° | ESTACION                   | TRABAJO A REALIZARSE | DIRECCION REGIONAL | CERCO PERIMÉTRICO COMPLETO | CASETA METEOROLOGICA TIPO "A" | CERCO PERIMÉTRICO COMPLETO US \$ | CASETA METEOROLOGICA TIPO "A" US \$ | TOTAL US \$ |
|----|----------------------------|----------------------|--------------------|----------------------------|-------------------------------|----------------------------------|-------------------------------------|-------------|
| 1  | CO-Sausal de Culucan       | Rehabilitación       | PIURA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 2  | CO-La Esperanza            | Rehabilitación       | PIURA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 3  | PLU-Matapalo               | Rehabilitación       | PIURA              | 1                          |                               | 423.00                           |                                     | 423.00      |
| 4  | CO-Huarmaca                | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 5  | CP-Huancabamba             | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 6  | CP-Ayabaca                 | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 7  | CO-Dos de Mayo             | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 8  | MAP-San Miguel             | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 9  | CO-Cabo Inga               | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 10 | CO-El Partidor             | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 11 | CO-Sondonilo               | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 12 | CO-Salala                  | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 13 | CO-Cañaverl                | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 14 | CO-Papayal                 | Rehabilitación       | PIURA              |                            | 1                             |                                  | 271.00                              | 271.00      |
| 15 | CP-Bambamarca              | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,871.37                         |                                     | 1,871.37    |
| 16 | CO-Chancay Baños           | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 17 | CO-Chinaco                 | Rehabilitación       | LAMBAYEQUE         | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06    |
| 18 | CO-Cutervo                 | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 19 | CO-Jazán                   | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 20 | CO-Puerto Chicama          | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 21 | CO-Reque                   | Rehabilitación       | LAMBAYEQUE         | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06    |
| 22 | CO-San Ignacio             | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 23 | PLU-Puente Cochallán       | Rehabilitación       | LAMBAYEQUE         | 1                          |                               | 423.00                           |                                     | 423.00      |
| 24 | CO-Chirinos                | Rehabilitación       | LAMBAYEQUE         |                            | 1                             |                                  | 271.00                              | 271.00      |
| 25 | CO-Motupe                  | Rehabilitación       | LAMBAYEQUE         |                            | 1                             |                                  | 271.00                              | 271.00      |
| 26 | CO-Asunción                | Rehabilitación       | CAJAMARCA          | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 27 | CO-Sondor                  | Rehabilitación       | CAJAMARCA          | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 28 | CO-Jesús                   | Rehabilitación       | CAJAMARCA          | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 29 | CO-Trujillo                | Rehabilitación       | CAJAMARCA          | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 30 | CP-Cafete                  | Rehabilitación       | LIMA               | 1                          |                               | 1,871.37                         |                                     | 1,871.37    |
| 31 | CO-Huarmey                 | Rehabilitación       | LIMA               | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 32 | PLU-Antioquia              | Rehabilitación       | LIMA               | 1                          |                               | 423.50                           |                                     | 423.50      |
| 33 | MAP-Alcantarilla           | Rehabilitación       | LIMA               |                            | 1                             |                                  | 271.00                              | 271.00      |
| 34 | CP-Andahuasi               | Rehabilitación       | LIMA               |                            | 1                             |                                  | 271.00                              | 271.00      |
| 35 | CO-Pacarán                 | Rehabilitación       | LIMA               |                            | 1                             |                                  | 271.00                              | 271.00      |
| 36 | CO-Paucaray                | Rehabilitación       | ICA                | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 37 | CO-Bernales                | Rehabilitación       | ICA                | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 38 | CO-Riachuelo               | Rehabilitación       | ICA                | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 39 | PLU-Lampa                  | Rehabilitación       | ICA                | 1                          |                               | 423.50                           |                                     | 423.50      |
| 40 | PLU-Huancasancos           | Rehabilitación       | ICA                | 1                          |                               | 423.50                           |                                     | 423.50      |
| 41 | PLU-Conta                  | Rehabilitación       | ICA                | 1                          |                               | 423.50                           |                                     | 423.50      |
| 42 | CO-San Pedro de Huacarpina | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 43 | CO-Huancano                | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 44 | CO-San Juan De Yanac       | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 45 | CO-Tunel Cero              | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 46 | CO-Puquio                  | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 47 | CO-Pauza                   | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 48 | CO-Huachos                 | Rehabilitación       | ICA                |                            | 1                             |                                  | 271.00                              | 271.00      |
| 49 | CP-Pampa Blanca            | Rehabilitación       | AREQUIPA           | 1                          |                               | 1,871.37                         |                                     | 1,871.37    |
| 50 | CO-Crucero Alto            | Rehabilitación       | AREQUIPA           | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 51 | CO-Imata                   | Rehabilitación       | AREQUIPA           | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06    |
| 52 | CO-Pampacolca              | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 53 | CO-Caylloma                | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 54 | CO-Pulhuay                 | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 55 | CO-Cabanaconde             | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 56 | CO-Madrigal                | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 57 | CO-Ayo                     | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 58 | CO-Chichas                 | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 59 | CO-Pampa de Arrieros       | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 60 | CO-Machahuay               | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 61 | CO-Yanaquihua              | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 62 | CO-Porpera                 | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 63 | CO-Chivay                  | Rehabilitación       | AREQUIPA           |                            | 1                             |                                  | 271.00                              | 271.00      |
| 64 | CO-Ilo                     | Rehabilitación       | TACNA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 65 | CO-Locumba                 | Rehabilitación       | TACNA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 66 | CO-Carumas                 | Rehabilitación       | TACNA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 67 | CO-Puquina                 | Rehabilitación       | TACNA              | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 68 | CO-Morona                  | Rehabilitación       | LORETO             | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 69 | CO-Trompeteros             | Rehabilitación       | LORETO             | 1                          |                               | 1,615.06                         |                                     | 1,615.06    |
| 70 | PLU-Santa Rita de Castilla | Rehabilitación       | LORETO             | 1                          |                               | 423.50                           |                                     | 423.50      |
| 71 | PLU-Breñaña                | Rehabilitación       | LORETO             | 1                          |                               | 423.50                           |                                     | 423.50      |
| 72 | PLU-Bagazán                | Rehabilitación       | LORETO             | 1                          |                               | 423.50                           |                                     | 423.50      |
| 73 | PLU-Punchana               | Rehabilitación       | LORETO             | 1                          |                               | 423.50                           |                                     | 423.50      |
| 74 | CO-Nauta                   | Rehabilitación       | LORETO             |                            | 1                             |                                  | 271.00                              | 271.00      |
| 75 | CO-San Roque               | Rehabilitación       | LORETO             |                            | 1                             |                                  | 271.00                              | 271.00      |
| 76 | CO-El Estrecho             | Rehabilitación       | LORETO             |                            | 1                             |                                  | 271.00                              | 271.00      |

CUADRO N° 18  
REQUERIMIENTO DE INFRAESTRUCTURA EN GENERAL AL MEDIANO PLAZO

| N°           | ESTACION             | TRABAJO A REALIZARSE | DIRECCION REGIONAL | CERCO PERIMÉTRICO COMPLETO | CASETA METEOROLOGICA TIPO "A" | CERCO PERIMÉTRICO COMPLETO US \$ | CASETA METEOROLOGICA TIPO "A" US \$ | TOTAL US \$      |
|--------------|----------------------|----------------------|--------------------|----------------------------|-------------------------------|----------------------------------|-------------------------------------|------------------|
| 77           | CO-Angamos           | Rehabilitación       | LORETO             |                            | 1                             |                                  | 271.00                              | 271.00           |
| 78           | CO-Navarro           | Rehabilitación       | SAN MARTIN         | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 79           | PLU-Cusco            | Rehabilitación       | SAN MARTIN         | 1                          |                               | 423.50                           |                                     | 423.50           |
| 80           | PLU-Pucallpa         | Rehabilitación       | SAN MARTIN         | 1                          |                               | 423.50                           |                                     | 423.50           |
| 81           | PLU-Shamboyacu       | Rehabilitación       | SAN MARTIN         | 1                          |                               | 423.50                           |                                     | 423.50           |
| 82           | CO-Dos de Mayo       | Rehabilitación       | HUANUCO            | 1                          |                               | 1,615.05                         |                                     | 1,615.05         |
| 83           | CP-Pucallpa          | Rehabilitación       | HUANUCO            |                            | 1                             |                                  | 271.00                              | 271.00           |
| 84           | CP-Huayao            | Rehabilitación       | JUNIN              | 1                          |                               | 1,871.37                         |                                     | 1,871.37         |
| 85           | CO-La Quinua         | Rehabilitación       | JUNIN              | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 86           | CO-Paucarbamba       | Rehabilitación       | JUNIN              |                            | 1                             |                                  | 271.00                              | 271.00           |
| 87           | CP-Urubamba          | Rehabilitación       | CUSCO              | 1                          |                               | 1,871.37                         |                                     | 1,871.37         |
| 88           | CP-Puerto Maldonado  | Rehabilitación       | CUSCO              | 1                          | 1                             | 1,871.37                         | 271.00                              | 2,142.37         |
| 89           | CO-Iñapari           | Rehabilitación       | CUSCO              | 1                          |                               | 1,871.37                         |                                     | 1,871.37         |
| 90           | CO-Quincemil         | Rehabilitación       | CUSCO              | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 91           | CO-La Quebrada       | Rehabilitación       | CUSCO              | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 92           | CP-Salvación         | Rehabilitación       | CUSCO              |                            | 1                             |                                  | 271.00                              | 271.00           |
| 93           | CP-Pakizta           | Rehabilitación       | CUSCO              |                            | 1                             |                                  | 271.00                              | 271.00           |
| 94           | CP-Acñaco            | Rehabilitación       | CUSCO              |                            | 1                             |                                  | 271.00                              | 271.00           |
| 95           | CO-Tambobamba        | Rehabilitación       | CUSCO              |                            | 1                             |                                  | 271.00                              | 271.00           |
| 96           | CP-Chuquibambilla    | Rehabilitación       | PUNO               | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 97           | CP-Puno              | Rehabilitación       | PUNO               | 1                          |                               | 1,871.37                         |                                     | 1,871.37         |
| 98           | CO-Azángaro          | Rehabilitación       | PUNO               | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06         |
| 99           | CO-Isle Soto         | Rehabilitación       | PUNO               | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 100          | CO-Macusani          | Rehabilitación       | PUNO               | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 101          | CO-Llaly             | Rehabilitación       | PUNO               | 1                          |                               | 1,615.06                         |                                     | 1,615.06         |
| 102          | CO-Taraco            | Rehabilitación       | PUNO               | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06         |
| 103          | CO-Huancane          | Rehabilitación       | PUNO               | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06         |
| 104          | CO-Isle Taquile      | Rehabilitación       | PUNO               | 1                          | 1                             | 1,615.06                         | 271.00                              | 1,886.06         |
| 105          | CO-San Gabán         | Rehabilitación       | PUNO               |                            | 1                             |                                  | 271.00                              | 271.00           |
| 106          | CO-Cojata            | Rehabilitación       | PUNO               |                            | 1                             |                                  | 271.00                              | 271.00           |
| 107          | CO-Rincón de la Cruz | Rehabilitación       | PUNO               |                            | 1                             |                                  | 271.00                              | 271.00           |
| 108          | CO-Tahuaco           | Rehabilitación       | PUNO               |                            | 1                             |                                  | 271.00                              | 271.00           |
| <b>TOTAL</b> |                      |                      |                    | <b>59</b>                  | <b>57</b>                     | <b>81,847.73</b>                 | <b>15,447.00</b>                    | <b>97,294.73</b> |

| Nº               | ESTACION                   | CAT | P.I. | DIRECCION REGIONAL | REUBICACION MAP  | REUBICACION CP  | REUBICACION CO  | REUBICACION PLU | TOTAL            |
|------------------|----------------------------|-----|------|--------------------|------------------|-----------------|-----------------|-----------------|------------------|
| 1                | MAP-Miraflores             | MAP | 1    | Piura              | 11,000.00        |                 |                 |                 | 11,000.00        |
| 2                | Talla                      | CP  | 2    | Lambayeque         |                  | 5,128.90        |                 |                 | 5,128.90         |
| 3                | San Juan                   | CO  | 3    | Cajamarca          |                  |                 | 1,178.35        |                 | 1,178.35         |
| 4                | Paramonga                  | CP  | 4    | Lima               |                  | 5,128.90        |                 |                 | 5,128.90         |
| 5                | Alto Perú                  | CO  | 4    | Lima               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 6                | Chiquián                   | CO  | 4    | Lima               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 7                | Recuay                     | CO  | 4    | Lima               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 8                | Yungay                     | CO  | 4    | Lima               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 9                | Huangascar                 | PE  | 4    | Lima               |                  |                 |                 | 726.33          | 726.33           |
| 10               | Pachamachay                | PLU | 4    | Lima               |                  |                 |                 | 726.33          | 726.33           |
| 11               | Mayorarca                  | PLU | 4    | Lima               |                  |                 |                 | 726.33          | 726.33           |
| 12               | San Juan de Castrovirreyna | CO  | 5    | Ica                |                  |                 | 1,178.35        |                 | 1,178.35         |
| 13               | Lampa                      | PLU | 5    | Ica                |                  |                 |                 | 726.33          | 726.33           |
| 14               | Lucanas                    | PLU | 5    | Ica                |                  |                 |                 | 726.33          | 726.33           |
| 15               | Chilcayoc                  | PLU | 5    | Ica                |                  |                 |                 | 726.33          | 726.33           |
| 16               | Huancasancos               | PLU | 5    | Ica                |                  |                 |                 | 726.33          | 726.33           |
| 17               | Pampa de Majes             | CP  | 6    | Arequipa           |                  | 5,128.90        |                 |                 | 5,128.90         |
| 18               | Chichas                    | CO  | 6    | Arequipa           |                  |                 | 1,178.35        |                 | 1,178.35         |
| 19               | Choco                      | CO  | 6    | Arequipa           |                  |                 | 1,178.35        |                 | 1,178.35         |
| 20               | La Yarada                  | CP  | 7    | Tacna              |                  | 5,128.90        |                 |                 | 5,128.90         |
| 21               | Candarave                  | CO  | 7    | Tacna              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 22               | Omate                      | CO  | 7    | Tacna              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 23               | Ilo                        | CO  | 7    | Tacna              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 24               | Sitajara                   | PLU | 7    | Tacna              |                  |                 |                 | 726.33          | 726.33           |
| 25               | Pilluana                   | PLU | 9    | San Martín         |                  |                 |                 | 726.33          | 726.33           |
| 26               | Picota                     | PLU | 10   | San Martín         |                  |                 |                 | 726.33          | 726.33           |
| 27               | Pucallpa                   | PLU | 10   | Huánuco            |                  |                 |                 | 726.33          | 726.33           |
| 28               | Huancavelica               | CO  | 11   | Junín              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 29               | Pto. Maldonado             | CP  | 12   | Cusco              |                  | 5,128.90        |                 |                 | 5,128.90         |
| 30               | Quincemil                  | CO  | 12   | Cusco              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 31               | Paucartambo                | CO  | 12   | Cusco              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 32               | Colquepata                 | CO  | 12   | Cusco              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 33               | Acomayo                    | CO  | 12   | Cusco              |                  |                 | 1,178.35        |                 | 1,178.35         |
| 34               | Puno                       | CP  | 13   | Puno               |                  | 5,128.90        |                 |                 | 5,128.90         |
| 35               | Cojata                     | CO  | 13   | Puno               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 36               | Huaraya Moho               | CO  | 13   | Puno               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 37               | Azangaro                   | CO  | 13   | Puno               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 38               | Ayaviri                    | CO  | 13   | Puno               |                  |                 | 1,178.35        |                 | 1,178.35         |
| 39               | Azángaro                   | CO  | 13   | Puno               |                  |                 | 1,178.35        |                 | 1,178.35         |
| <b>SUB TOTAL</b> |                            |     |      |                    | <b>11,000.00</b> | <b>30,773.4</b> | <b>24,745.4</b> | <b>7,989.63</b> | <b>74,508.38</b> |

## PLAN DE REUBICACION DE ESTACIONES HIDROLOGICAS

| N° | ESTACION             | CAT | DDRR       |
|----|----------------------|-----|------------|
| 1  | Tabaconas *          | HLG | Piura      |
| 2  | Puente Chunchuca     | HLG | Lambayeque |
| 3  | Magunchal *          | HLG | Lambayeque |
| 4  | Río Vado *           | HLG | Cajamarca  |
| 5  | Laguna Huangacocha * | HLM | Cajamarca  |
| 6  | Cascabamba *         | HLM | Cajamarca  |
| 7  | Socsi Cañete         | HLG | Lima       |
| 8  | Santo Domingo        | HLG | Lima       |
| 9  | Santa Eulalia        | HLM | Lima       |
| 10 | Sheque               | HLM | Lima       |
| 11 | Pte Huachipa *       | HLM | Lima       |
| 12 | Laguna Surasaca *    | HLM | Lima       |
| 13 | Laguna Cochaquillo * | HLM | Lima       |
| 14 | Huasapampa *         | HLG | Ica        |
| 15 | Contamana            | HLM | Loreto     |
| 16 | Nauta                | HLM | Loreto     |
| 17 | San Regis            | HLM | Loreto     |
| 18 | Chacllabamba *       | HLG | Cusco      |
| 19 | Puente Moyocache *   | HLM | Puno       |
| 20 | Isla Cabanillas      | HLM | Puno       |

\* Estaciones solicitadas por la DGH.



### 9.3. Largo plazo

Periodo comprendido de 6 a 10 años, se ha considerado en este periodo financiar el requerimiento de la totalidad de instrumental por parte de la red nacional de estaciones, tanto de instrumentos de lectura directa como de registro, de acuerdo a la categoría de cada estación indicados en los cuadros anteriormente mostrados N° 04, 05 y 06 respectivamente; es decir, comprende la totalidad de instrumentos que se requieren para completar al 100% las estaciones meteorológicas agrícolas, las climatológicas y por último las hidrológicas, a quienes se ha considerado la adquisición de 25 correntómetros para completar el equipamiento de dichas estaciones, así como también, renovar algunos equipos, que tienen una antigüedad de hasta 49, 42 y 30 años, respectivamente, siendo los mas antiguos de la red, los cuales se encuentran ubicados en las direcciones regionales de Lambayeque, Ica y Puno; a fin de que puedan cumplir con el programa de observaciones para cada categoría y con el monitoreo de las variables, donde se detalla la cantidad y valorización de la necesidad de instrumental por parte de las Direcciones Regionales, se encuentran desagregadas en los cuadros 21-1(A y B) hasta 21-13 (A Y B) lo cual asciende a la suma de \$ 5'649,108.00 Dólares Americanos, cuyo detalle se aprecia en los cuadros N° 22 y 23. Además se ha determinado que en la red hay 46 estaciones Climatológicas Principales y Meteorológicas Agrícolas que no cuentan con Sala de instrumental, cuya construcción demanda la suma de \$ 168,300.00 Dólares Americanos, cuyo detalle se aprecia en el cuadro N° 24.

En tal sentido, se ha llegado a determinar las siguientes sumas que se requiere para financiar las actividades que se detallan a continuación:











**CUADRO N° 21-2B**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE LAMBAYEQUE**

| N°                          | ESTACION           | CAT. | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |            |             |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL  |             |            |                 |             |           |   |       |   |   |   |   |   |   |   |       |            |       |        |        |        |
|-----------------------------|--------------------|------|---------------------------------|----------------------|--------------------|--------------------|--|------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|--------|-------------|------------|-----------------|-------------|-----------|---|-------|---|---|---|---|---|---|---|-------|------------|-------|--------|--------|--------|
|                             |                    |      | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |        | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |   |       |   |   |   |   |   |   |   |       |            |       |        |        |        |
| 43                          | Porculla           | PLU  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 6,650 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 6,650 |        |        |        |
| 44                          | Pte. Chunchuca     | PLU  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,650 |            |       |        |        |        |
| 45                          | Qda. Shugar        | PLU  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     |            |       |        |        |        |
| 46                          | Querocotillo       | PLU  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     |            |       |        |        |        |
| 47                          | Cochalán           | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          |       |        |        |        |
| 48                          | Chancay Cirato     | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          |       |        |        |        |
| 49                          | Chotano Lajas      | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          |       |        |        |        |
| 50                          | Los Naranjos       | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     |        |        |        |
| 51                          | Llaucano Corellama | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     |        |        |        |
| 52                          | Magunchal          | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     |        |        |        |
| 53                          | Pte. Chunchuca     | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 0      |        |        |
| 54                          | Pte. Maygasbamba   | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 0      |        |        |
| 55                          | Puchaca            | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 0      | 0      |        |
| RED DE ESTACIONE DE SENAMHI |                    |      |                                 |                      |                    |                    |  |            |             |                             |                                 |                        |                              |                     |                     |                        |                          |                        |                            |                  |            |              |            |            |            |                |        |             |            |                 |             |           |   |       |   |   |   |   |   |   |   |       |            |       |        |        |        |
| 1                           | Ferreñafe          | CP   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 450   |        |        |        |
| 2                           | Lambayeque         | CP   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 1,700                  | 2,200                        | 0                   | 0                   | 4,390                  | 0                        | 0                      | 0                          | 0                | 8,200      | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 1,960 | 0      | 0      | 18,900 |
| 3                           | Pasabar            | CP   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 350         | 200                         | 0                               | 1,700                  | 2,200                        | 0                   | 5,000               | 4,390                  | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 1,961      | 0          | 8,350          | 6,850  | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 0      | 31,051 |        |
| 4                           | Tinajones          | CP   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 5,000               | 0                      | 8,000                    | 0                      | 0                          | 0                | 8,200      | 0            | 0          | 0          | 0          | 0              | 6,850  | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 28,300 |        |        |
| 5                           | Chirinos           | CO   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 2,430      | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 7,040 |        |        |        |
| 6                           | Montegrande        | CO   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 2,850  |        |        |
| 7                           | Santa Cruz         | CO   | 0                               | 0                    | 0                  | 0                  | 0  | 250        | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 2,430      | 0          | 0          | 0              | 6,850  | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     | 11,730 |        |        |
| 8                           | Batán              | HLG  | 0                               | 0                    | 0                  | 0                  | 0  | 0          | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0      | 0           | 0          | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0          | 0     |        |        |        |
| SUB TOTAL                   |                    |      | 0                               | 0                    | 0                  | 0                  | 0  | 10,750     | 350         | 8,600                       | 5,760                           | 8,500                  | 85,800                       | 3,980               | 30,000              | 28,535                 | 40,000                   | 0                      | 0                          | 0                | 49,200     | 0            | 65,610     | 3,922      | 0          | 41,750         | 86,450 | 0           | 45,080     | 0               | 0           | 0         | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 514,267.00 |       |        |        |        |



CUADRO N° 21-3B  
 REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
 DIRECCION REGIONAL DE CAJAMARCA

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|
|    |          |     | TERMOMETRO DE MÁXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO |

RED DE ESTACIONES DE SENAMHI

|    |                   |     |   |     |   |   |   |     |     |     |     |   |       |     |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |       |       |       |       |       |
|----|-------------------|-----|---|-----|---|---|---|-----|-----|-----|-----|---|-------|-----|---|---|---|---|---|---|---|---|---|---|-------|---|---|---|---|---|---|---|---|---|-------|-------|-------|-------|-------|
| 1  | Asunción          | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 960 | 0 | 2,200 | 990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,960 | 0     | 0     | 6,580 |       |
| 2  | Cachicadán        | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 3  | Cajabamba         | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 350 | 200 | 960 | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0     | 3,960 |       |       |
| 4  | Callanca          | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 5  | Celendín          | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0     | 2,650 |       |       |
| 6  | Contumaza         | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0     | 450   |       |       |
| 7  | Cospán            | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 8  | Hacienda Quilate  | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 9  | La Encañada       | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,960 | 0     | 0     | 4,610 |       |
| 10 | Llapa             | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 11 | Magdalena         | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 12 | Namora            | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 960 | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |
| 13 | Salpo             | CO  | 0 | 200 | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,240 |
| 14 | San Benito        | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 15 | San Juan          | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 960 | 0 | 2,200 | 990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,990 |
| 16 | San Marcos        | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0     | 450   |       |       |
| 17 | San Miguel        | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |
| 18 | San Pablo         | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 4,610 |
| 19 | Sondor            | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 960 | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 5,570 |
| 20 | Trujillo          | CO  | 0 | 0   | 0 | 0 | 0 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 1,960 | 0     | 0     | 4,610 |
| 21 | Cachachi          | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 22 | Chugur            | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 23 | Hda. Lives        | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 24 | Huangacocho       | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 25 | Jalcán            | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 26 | Mollepata         | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 27 | Puente Chilete    | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 28 | Quiruvilca        | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 350 | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 7,000 |
| 29 | Río Huacamarcanga | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |
| 30 | Sinsicap          | PLU | 0 | 0   | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     | 6,650 | 0     | 0     | 6,650 |

CUADRO N° 21-3B  
 REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
 DIRECCION REGIONAL DE CAJAMARCA

| N° | ESTACION         | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                       |                            |                  |            |              |            |            |            |                |             | TOTAL |            |                 |             |           |   |
|----|------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|-----------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|-------|------------|-----------------|-------------|-----------|---|
|    |                  |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO |       | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |   |
| 31 | Chilete          | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 32 | Mashcón          | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 33 | Cascabamba       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 34 | Huacamanga       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 35 | Lag. Huangacocha | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 36 | Puente Crisnejas | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |
| 37 | Río Vado         | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 |

RED DE ESTACIONES POR CONVENIO

|              |                    |     |            |            |          |          |          |              |              |              |              |          |               |              |              |              |              |          |               |          |          |          |               |          |               |          |               |          |               |            |              |                   |       |        |
|--------------|--------------------|-----|------------|------------|----------|----------|----------|--------------|--------------|--------------|--------------|----------|---------------|--------------|--------------|--------------|--------------|----------|---------------|----------|----------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|------------|--------------|-------------------|-------|--------|
| 1            | Augusto Weberbauer | MAP | 0          | 0          | 0        | 0        | 0        | 250          | 0            | 0            | 0            | 0        | 0             | 0            | 5,000        | 4,390        | 8,000        | 0        | 0             | 0        | 0        | 0        | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 100               | 4,600 | 22,340 |
| 2            | Granja Porcón      | CO  | 200        | 0          | 0        | 0        | 0        | 250          | 0            | 200          | 0            | 0        | 0             | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 0        | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 0     | 650    |
| 3            | Huamachuco         | CO  | 0          | 0          | 0        | 0        | 0        | 250          | 0            | 200          | 960          | 0        | 2,200         | 990          | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 2,430    | 0             | 0        | 0             | 0        | 0             | 0        | 1,960         | 0          | 0            | 0                 | 0     | 8,990  |
| 4            | Jesús Tunel        | CO  | 0          | 0          | 0        | 0        | 0        | 250          | 0            | 0            | 0            | 0        | 2,200         | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 2,430    | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 0     | 4,880  |
| 5            | Aylambo            | PE  | 200        | 0          | 0        | 0        | 0        | 0            | 0            | 0            | 0            | 0        | 0             | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 0        | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 200   |        |
| 6            | La Victoria        | PE  | 0          | 0          | 0        | 0        | 0        | 0            | 0            | 0            | 0            | 0        | 0             | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 0        | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 0     |        |
| 7            | Jesus Tunel        | HLG | 0          | 0          | 0        | 0        | 0        | 0            | 0            | 0            | 0            | 0        | 0             | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 0        | 0             | 6,185    | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 0     | 6,185  |
| 8            | Namora Bocatoma    | HLG | 0          | 0          | 0        | 0        | 0        | 0            | 0            | 0            | 0            | 0        | 0             | 0            | 0            | 0            | 0            | 0        | 0             | 0        | 0        | 0        | 0             | 0        | 0             | 0        | 0             | 0        | 0             | 0          | 0            | 0                 | 0     |        |
| <b>TOTAL</b> |                    |     | <b>400</b> | <b>200</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>6,000</b> | <b>1,050</b> | <b>4,400</b> | <b>5,760</b> | <b>0</b> | <b>44,000</b> | <b>2,970</b> | <b>5,000</b> | <b>4,390</b> | <b>8,000</b> | <b>0</b> | <b>31,000</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>31,590</b> | <b>0</b> | <b>43,295</b> | <b>0</b> | <b>59,850</b> | <b>0</b> | <b>33,320</b> | <b>100</b> | <b>4,600</b> | <b>285,925.00</b> |       |        |





CUADRO N° 21-4A  
 REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
 DIRECCION REGIONAL DE LIMA

| N°  | ESTACION         | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     | INSTRUMENTOS DE REGISTRO |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
|-----|------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|--------------------------|--------------------------------|---------------------|---------------------|--------------------------|-------------|-----------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-----------------|-------------|-----------|--|--|---|---|--|
|     |                  |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANELOMOMETRO TOTALIZADOR | ANELOMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO   | PIRANOMETRO | MIRA LIMNIMETRICA (m) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |  |  |   |   |  |
| 82  | Antapucro        | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   | 1 |  |
| 83  | Cahua            | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   | 1 |  |
| 84  | Chosica          | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 85  | La Capilla       | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 86  | Obrajillo        | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 87  | Picoy            | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 88  | Puente Magdalena | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  | 2 |   |  |
| 89  | Rio Blanco       | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 90  | San Mateo        | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 91  | Santo Domingo    | HLG |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 92  | Autisha          | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 93  | Lag. Cochaquillo | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 94  | Lag. Surasaca    | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 95  | Milloc           | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 96  | Pacarán          | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 97  | Pariacancha      | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 98  | Puente Huachipa  | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 99  | Rio Pallanga     | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 100 | Rumichaca        | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 101 | Santa Eulalia    | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 102 | Sheque           | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |
| 103 | Socsi Cañete     | HLM |                                 |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                          |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |   |   |  |

RED DE ESTACIONES POR CONVENIO

| N°    | ESTACION       | CAT | TERMOMETRO DE MAXIMA | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANELOMOMETRO TOTALIZADOR | ANELOMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMETRICA (m) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |  |  |  |  |   |   |  |
|-------|----------------|-----|----------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|--------------------------|--------------------------------|---------------------|---------------------|------------------------|-------------|-----------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-----------------|-------------|-----------|--|--|--|--|---|---|--|
| 1     | Alcantarilla   | MAP |                      |                      |                    |                    |  | 1                |             | 1                           |                                 |                          |                                | 1                   |                     |                        |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   | 1 |  |
| 2     | Huaraz         | MAP |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                | 1                   |                     | 1                      |             |                       |                            |                  | 1          |              |            |            |            |                |             |            |                 |             |           |  |  |  |  | 1 | 1 |  |
| 3     | Campo Marte    | CP  |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                |                     |                     | 1                      |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 4     | Cañete         | CP  |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                |                     |                     | 1                      |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 5     | Huacatambo     | CP  |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                | 1                   |                     | 1                      |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 6     | Huarangal      | CP  |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                | 1                   |                     | 1                      |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 7     | Marcopomacocha | CO  |                      |                      |                    |                    |  |                  | 1           |                             | 1                               |                          |                                | 1                   |                     | 1                      |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 8     | Carania        | PE  |                      |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                        |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 9     | Huangascar     | PE  |                      |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                        |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 10    | Socsi Cañete   | PE  |                      |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                        |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| 11    | Vilca          | PE  |                      |                      |                    |                    |  |                  |             |                             |                                 |                          |                                |                     |                     |                        |             |                       |                            |                  |            |              |            |            |            |                |             |            |                 |             |           |  |  |  |  |   |   |  |
| TOTAL |                |     | 2                    | 0                    | 1                  | 2                  | 1  | 40               | 0           | 39                          | 15                              | 6                        | 36                             | 7                   | 8                   | 22                     | 11          | 2                     | 2                          | 2                | 2          | 1            | 23         | 2          | 0          | 8              | 53          | 0          | 20              | 1           | 2         |  |  |  |  |   |   |  |





CUADRO N° 21-4B  
REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE LIMA

| N°  | ESTACION         | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |             |                             |                                 |                        |                              |                     |                     |                        |             | INSTRUMENTOS DE REGISTRO |                            |                  |            |              |            |            |            |                |             |            | TOTAL |                 |             |           |        |
|-----|------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|--------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-------|-----------------|-------------|-----------|--------|
|     |                  |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMÉTRICA (m.)   | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |       | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |        |
| 82  | Antapucro        | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 31,000                   | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 31,000 |
| 83  | Cahua            | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 31,000                   | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 31,000    |        |
| 84  | Chosica          | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         |        |
| 85  | La Capilla       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         |        |
| 86  | Obrajillo        | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         |        |
| 87  | Picoy            | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         |        |
| 88  | Puente Magdalena | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 140                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 140    |
| 89  | Rio Blanco       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 90  | San Mateo        | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 91  | Santo Domingo    | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 92  | Autisha          | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 93  | Lag. Cochaquillo | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 94  | Lag. Surasaca    | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 95  | Milloc           | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 96  | Pacarán          | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 97  | Pariacancha      | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 98  | Puente Huachipa  | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 99  | Rio Pallanga     | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 100 | Rumichaca        | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 101 | Santa Eulalia    | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 102 | Sheque           | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |
| 103 | Socsi Cañete     | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0      |

RED DE ESTACIONES POR CONVENIO

|       |                |     |     |   |       |       |     |        |   |       |        |        |        |       |        |        |        |     |        |        |        |       |        |       |       |        |         |       |        |     |       |         |        |
|-------|----------------|-----|-----|---|-------|-------|-----|--------|---|-------|--------|--------|--------|-------|--------|--------|--------|-----|--------|--------|--------|-------|--------|-------|-------|--------|---------|-------|--------|-----|-------|---------|--------|
| 1     | Alcantarilla   | MAP | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 0      | 0      | 2,200  | 0     | 0      | 8,000  | 0      | 0   | 25,359 | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 4,600   | 40,609 |
| 2     | Huaraz         | MAP | 0   | 0 | 1,500 | 0     | 200 | 250    | 0 | 200   | 0      | 1,700  | 2,200  | 0     | 5,000  | 6,585  | 8,000  | 0   | 0      | 25,359 | 0      | 4,260 | 0      | 0     | 0     | 8,350  | 0       | 0     | 0      | 100 | 4,600 | 68,304  |        |
| 3     | Campo Marte    | CP  | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 0      | 0      | 2,200  | 0     | 0      | 8,000  | 0      | 0   | 0      | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 0       | 10,650 |
| 4     | Cañete         | CP  | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 0      | 0      | 2,200  | 0     | 0      | 6,585  | 8,000  | 0   | 0      | 0      | 8,200  | 0     | 0      | 0     | 8,350 | 6,650  | 0       | 0     | 0      | 0   | 0     | 0       | 40,435 |
| 5     | Huacatambo     | CP  | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 0      | 1,700  | 2,200  | 0     | 5,000  | 4,390  | 8,000  | 0   | 0      | 0      | 0      | 0     | 0      | 8,350 | 6,650 | 0      | 0       | 0     | 0      | 0   | 0     | 38,740  |        |
| 6     | Huarangal      | CP  | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 960    | 1,700  | 2,200  | 0     | 5,000  | 6,585  | 8,000  | 0   | 0      | 0      | 0      | 0     | 2,430  | 0     | 0     | 0      | 6,650   | 0     | 1,960  | 0   | 0     | 0       | 35,935 |
| 7     | Marcapomacocha | CO  | 0   | 0 | 0     | 0     | 0   | 250    | 0 | 200   | 960    | 0      | 2,200  | 0     | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 2,430 | 0      | 0     | 0     | 0      | 0       | 1,960 | 0      | 0   | 0     | 0       | 8,000  |
| 8     | Carania        | PE  | 0   | 0 | 0     | 0     | 0   | 0      | 0 | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 0       | 0      |
| 9     | Huangascar     | PE  | 0   | 0 | 0     | 0     | 0   | 0      | 0 | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 0       | 0      |
| 10    | Socsi Cañete   | PE  | 0   | 0 | 0     | 1,000 | 0   | 0      | 0 | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 0       | 1,000  |
| 11    | Vilca          | PE  | 0   | 0 | 0     | 1,000 | 0   | 0      | 0 | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0   | 0      | 0      | 0      | 0     | 0      | 0     | 0     | 0      | 0       | 0     | 0      | 0   | 0     | 0       | 1,000  |
| TOTAL |                |     | 400 | 0 | 1,500 | 2,000 | 200 | 10,000 | 0 | 7,800 | 14,400 | 10,200 | 79,200 | 6,930 | 40,000 | 48,290 | 88,000 | 140 | 82,000 | 50,718 | 16,400 | 4,260 | 55,890 | 3,922 | 0     | 66,800 | 352,450 | 0     | 39,200 | 100 | 9,200 | 970,000 |        |



CUADRO N° 21-5B  
REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE ICA

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                     |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|---------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|
|    |          |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMÓMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTÉRMOMETRO | PLUVIOMETRO 200 Cm2 | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO |

RED DE ESTACIONES DE SENAMHI

|    |                         |     |   |   |   |   |     |     |     |     |     |   |       |     |       |       |       |   |   |        |   |       |       |   |       |       |       |       |       |     |       |        |
|----|-------------------------|-----|---|---|---|---|-----|-----|-----|-----|-----|---|-------|-----|-------|-------|-------|---|---|--------|---|-------|-------|---|-------|-------|-------|-------|-------|-----|-------|--------|
| 1  | Fonagro                 | MAP | 0 | 0 | 0 | 0 | 200 | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 5,000 | 4,390 | 8,000 | 0 | 0 | 25,359 | 0 | 4,260 | 0     | 0 | 0     | 8,350 | 6,650 | 0     | 1,960 | 100 | 4,600 | 71,519 |
| 2  | San Camilo              | MAP | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 8,000 | 0 | 0 | 0      | 0 | 4,260 | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 100 | 4,600 | 17,410 |
| 3  | Don Carlos              | CP  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 2,195 | 8,000 | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 8,350 | 0     | 0     | 0     | 0     | 0   | 0     | 21,195 |
| 4  | Chala                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 7,040  |
| 5  | Challaca                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 6  | Chaparra                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 7,040  |
| 7  | Chilcayoc               | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 980 | 0 | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 6,650 | 0     | 1,960 | 0   | 0     | 15,440 |
| 8  | Copara                  | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 9  | Cora Cora               | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 10 | Cusicancha              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 1,960 | 0     | 0   | 4,610 |        |
| 11 | Hda. Bernales           | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 1,961 | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 4,611 |        |
| 12 | Huac - Huas             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 13 | Huachos                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 960 | 0 | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 8,990  |
| 14 | Huamani                 | CO  | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 6,790  |
| 15 | Huancano                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 1,960 | 0     | 0   | 4,610 |        |
| 16 | Lomas                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 980 | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 8,000  |
| 17 | Ocucaje                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 1,440 |        |
| 18 | Palpa                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 1,960 | 0     | 0   | 4,610 |        |
| 19 | Paucaray                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 20 | Pausa                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 350 | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 800   |        |
| 21 | Puquio                  | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 960 | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 1,820 | 0     | 0   | 7,860 |        |
| 22 | Río Grande              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 6,070 |        |
| 23 | San Juan -Castrovireyna | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 960 | 0 | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 8,990  |
| 24 | San Juan de Yanac       | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 960 | 0 | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 8,990  |
| 25 | San Pedro de Huacarpana | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 450   |        |
| 26 | Santiago de Chocorvos   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 7,040  |
| 27 | Tacama                  | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 960 | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 1,961 | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 5,571 |        |
| 28 | Tambo                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 1,960 | 0   | 0     | 7,040  |
| 29 | Tunei Cero              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0   | 0 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 2,430 | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 5,080 |        |
| 30 | Pampa Blanca            | PE  | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0     | 0   | 0     |        |

CUADRO N° 21-5B  
REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE ICA

| N° | ESTACION     | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |   |                  |                     |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |           |            |            |                |             | TOTAL |            |                 |             |            |   |       |        |       |
|----|--------------|-----|---------------------------------|----------------------|--------------------|--------------------|---|------------------|---------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|-----------|------------|------------|----------------|-------------|-------|------------|-----------------|-------------|------------|---|-------|--------|-------|
|    |              |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm JUNTO AL SUELO | HIDROTHERMÓMETRO | PLUVIOMETRO 200 Cm2 | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO |       | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | ALISIMETRO |   |       |        |       |
| 31 | Villacurí    | PE  | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      | 0     |
| 32 | Santiago     | PE  | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      | 0     |
| 33 | Conta        | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      | 0     |
| 34 | Córdova      | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      | 0     |
| 35 | Choclococha  | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 6,650      | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      | 6,650 |
| 36 | Huallpoca    | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 6,650  |       |
| 37 | Huamani      | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      |       |
| 38 | Huancasancos | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 6,650  |       |
| 39 | Lampa        | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 6,650  |       |
| 40 | Letrayoc     | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      |       |
| 41 | Lucanas      | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 350                 | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 7,000  |       |
| 42 | Llauta       | PLU | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 6,650  |       |
| 43 | Conta        | HLG | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 140                    | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 31,140 |       |
| 44 | Challaca     | HLG | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 6,185     | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 6,185 |        |       |
| 45 | Huasapampa   | HLG | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 350                 | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 140                    | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 6,650      | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 7,140  |       |
| 46 | Letrayoc     | HLG | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 140                    | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 31,140 |       |
| 47 | Llauta       | HLM | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 140                    | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 140    |       |
| 48 | Huallpoca    | HLM | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 70                     | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 31,070 |       |
| 49 | Huamani      | HLM | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 70                     | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 70     |       |
| 50 | Huancasancos | HLM | 0                               | 0                    | 0                  | 0                  | 0   | 0                | 0                   | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0         | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0          | 0 | 0     | 0      |       |

RED DE ESTACIONES POR CONVENIO

|       |             |     |   |   |   |   |     |       |       |       |       |   |        |       |       |       |        |     |         |        |   |       |        |       |       |        |        |       |        |     |       |   |         |   |        |       |
|-------|-------------|-----|---|---|---|---|-----|-------|-------|-------|-------|---|--------|-------|-------|-------|--------|-----|---------|--------|---|-------|--------|-------|-------|--------|--------|-------|--------|-----|-------|---|---------|---|--------|-------|
| 1     | Riachuelo   | CO  | 0 | 0 | 0 | 0 | 0   | 250   | 0     | 200   | 0     | 0 | 0      | 0     | 0     | 0     | 0      | 0   | 0       | 0      | 0 | 0     | 0      | 0     | 0     | 0      | 0      | 0     | 0      | 0   | 0     | 0 | 0       | 0 | 450    |       |
| 2     | Chipao      | PE  | 0 | 0 | 0 | 0 | 0   | 0     | 0     | 0     | 0     | 0 | 0      | 0     | 0     | 0     | 0      | 0   | 0       | 0      | 0 | 0     | 0      | 0     | 0     | 0      | 0      | 0     | 0      | 0   | 0     | 0 | 0       | 0 | 0      |       |
| 3     | Soras       | PE  | 0 | 0 | 0 | 0 | 0   | 0     | 0     | 0     | 960   | 0 | 0      | 990   | 0     | 0     | 0      | 0   | 0       | 0      | 0 | 2,430 | 0      | 0     | 0     | 0      | 0      | 0     | 0      | 0   | 0     | 0 | 0       | 0 | 0      | 4,380 |
| 4     | Los Molinos | HLG | 0 | 0 | 0 | 0 | 0   | 0     | 0     | 0     | 0     | 0 | 0      | 0     | 0     | 0     | 31,000 | 0   | 0       | 0      | 0 | 0     | 0      | 0     | 0     | 0      | 0      | 0     | 0      | 0   | 0     | 0 | 0       | 0 | 31,000 |       |
| Total |             |     | 0 | 0 | 0 | 0 | 200 | 7,250 | 1,050 | 5,800 | 7,680 | 0 | 44,000 | 6,930 | 5,000 | 6,585 | 24,000 | 700 | 124,000 | 25,359 | 0 | 8,520 | 34,020 | 3,922 | 6,185 | 16,700 | 59,850 | 1,820 | 27,440 | 200 | 9,200 | 0 | 426,411 |   |        |       |





CUADRO N° 21-6B  
 REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
 DIRECCION REGIONAL DE AREQUIPA

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |             |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|
|    |          |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 Cm. SOBRE EL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIIGRAFO |

RED DE ESTACIONES DE SENAMHI

|    |                   |     |     |     |   |       |     |     |     |     |       |       |       |     |       |       |       |   |   |        |   |       |       |   |       |       |       |       |   |       |        |        |
|----|-------------------|-----|-----|-----|---|-------|-----|-----|-----|-----|-------|-------|-------|-----|-------|-------|-------|---|---|--------|---|-------|-------|---|-------|-------|-------|-------|---|-------|--------|--------|
| 1  | La Joya           | MAP | 0   | 0   | 0 | 0     | 600 | 250 | 0   | 200 | 0     | 0     | 2,200 | 0   | 0     | 2,195 | 8,000 | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 100   | 14,500 | 28,045 |
| 2  | Pampa de Majes    | MAP | 0   | 0   | 0 | 0     | 200 | 250 | 0   | 200 | 0     | 0     | 2,200 | 0   | 5,000 | 4,390 | 8,000 | 0 | 0 | 25,359 | 0 | 4,260 | 0     | 0 | 0     | 8,350 | 6,650 | 0     | 0 | 100   | 14,500 | 79,459 |
| 3  | Pampa Blanca      | CP  | 0   | 0   | 0 | 0     | 600 | 250 | 0   | 200 | 0     | 1,700 | 2,200 | 0   | 0     | 0     | 8,000 | 0 | 0 | 0      | 0 | 0     | 1,961 | 0 | 8,350 | 6,650 | 0     | 0     | 0 | 0     | 0      | 29,911 |
| 4  | Andagua           | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 960 | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,000  |        |
| 5  | Aplao             | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 1,960 | 0     | 0 | 4,610 |        |        |
| 6  | Ayahuasi          | CO  | 0   | 0   | 0 | 1,000 | 0   | 250 | 350 | 200 | 960   | 1,700 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 11,050 |        |
| 7  | Ayo               | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,040  |        |
| 8  | Cabanaconde       | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 1,700 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 1,960 | 0     | 0 | 6,310 |        |        |
| 9  | Camaná            | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 1,700 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 1,960 | 0     | 0 | 6,310 |        |        |
| 10 | Caraveli          | CO  | 0   | 200 | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 2,850 |        |        |
| 11 | Caylloma          | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,040  |        |
| 12 | Chachas           | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 960 | 0     | 0     | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,990  |        |
| 13 | Chichas           | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 0   | 0   | 0     | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 250   |        |        |
| 14 | Chiguata          | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 5,080 |        |        |
| 15 | Chivay            | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 1,700 | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 2,150 |        |        |
| 16 | Choco             | CO  | 0   | 0   | 0 | 0     | 200 | 250 | 0   | 200 | 960   | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,200  |        |
| 17 | Chuquibamba       | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,040  |        |
| 18 | Cotahuasi         | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 450   |        |        |
| 19 | Crucero Alto      | CO  | 0   | 0   | 0 | 1,000 | 0   | 250 | 0   | 200 | 0     | 0     | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 9,030  |        |
| 20 | El Frayle         | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,040  |        |
| 21 | Huambo            | CO  | 0   | 0   | 0 | 0     | 200 | 250 | 0   | 200 | 960   | 1,700 | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 1,961 | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 9,901  |        |
| 22 | Huanca            | CO  | 200 | 200 | 0 | 1,000 | 0   | 250 | 0   | 200 | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,440  |        |
| 23 | Huasacache        | CO  | 0   | 0   | 0 | 0     | 600 | 250 | 0   | 200 | 0     | 0     | 2,200 | 0   | 0     | 6,585 | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 12,285 |        |
| 24 | Imata             | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 5,080 |        |        |
| 25 | La Angostura      | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 450   |        |        |
| 26 | La Haciendita     | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 0   | 0   | 0     | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 250   |        |        |
| 27 | Las Salinas       | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 1,700 | 2,200 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,740  |        |
| 28 | Machahuay         | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,030  |        |
| 29 | Madrigal          | CO  | 0   | 0   | 0 | 0     | 250 | 350 | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,390  |        |
| 30 | Mollendo          | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,040  |        |
| 31 | Orcopampa         | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 960 | 0     | 0     | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,820 | 0 | 0     | 8,850  |        |
| 32 | Pampa de Arrieros | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 960 | 0     | 0     | 2,200 | 990 | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,990  |        |
| 33 | Pampacolca        | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 1,961 | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 7,041  |        |
| 34 | Pillones          | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 200 | 960 | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 8,000  |        |
| 35 | Porpera           | CO  | 0   | 0   | 0 | 1,000 | 0   | 250 | 0   | 200 | 960   | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 9,000  |        |
| 36 | Punta Atico       | CO  | 0   | 0   | 0 | 0     | 0   | 0   | 200 | 960 | 1,700 | 2,200 | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 7,020  |        |
| 37 | Salamanca         | CO  | 0   | 0   | 0 | 0     | 250 | 0   | 0   | 0   | 0     | 0     | 0     | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 250   |        |        |
| 38 | Sibayo            | CO  | 0   | 0   | 0 | 0     | 0   | 0   | 200 | 0   | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 6,790  |        |
| 39 | Sumbay            | CO  | 0   | 0   | 0 | 1,000 | 0   | 250 | 0   | 200 | 0     | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 5,610  |        |
| 40 | Tisco             | CO  | 200 | 200 | 0 | 1,000 | 0   | 250 | 0   | 200 | 960   | 0     | 2,200 | 0   | 0     | 0     | 0     | 0 | 0 | 0      | 0 | 2,430 | 0     | 0 | 0     | 0     | 0     | 1,960 | 0 | 0     | 9,400  |        |

CUADRO N° 21-6B  
REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE AREQUIPA

| N°                             | ESTACION       | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                         |                            |                  |            |              |            |            |            |                |             |            | TOTAL  |                 |              |           |       |        |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
|--------------------------------|----------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|-------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|--------|-----------------|--------------|-----------|-------|--------|---|-------|--------|---|---|---|---|---|-------|---|---|---|-----|--------|--------|---|
|                                |                |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 Cm. SOBRE EL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMINIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |        | TERMOHIGROGRAFO | TENSIONMETRO | LISIMETRO |       |        |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 41                             | Ubinas         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 1,960 | 0      | 0 | 7,040 |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 42                             | Yanaquihua     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 250    |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 43                             | Chinchayllapa  | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 44                             | Charcani       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 45                             | Hda. Pampata   | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 46                             | Huatiapa       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 47                             | La Angostura   | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 31,000 |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 48                             | La Pascana     | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 49                             | Pte del Diablo | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 50                             | Sibayo         | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 31,000 |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 51                             | Sumbay         | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 52                             | Tingo Grande   | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 140    |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 53                             | Cuyau          | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 31,000 |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 54                             | Salamanca      | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 6,185  |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| RED DE ESTACIONES POR CONVENIO |                |     |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |                          |                         |                            |                  |            |              |            |            |            |                |             |            |        |                 |              |           |       |        |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |
| 1                              | La Pampilla    | MAP | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 8,000  | 0 | 0     | 25,359 | 0 | 0 | 0 | 0 | 0 | 8,350 | 0 | 0 | 0 | 100 | 14,500 | 56,559 |   |
| 2                              | Ocoña          | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                       | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0      | 0               | 0            | 0         | 0     | 0      | 0 | 0     | 0      | 0 | 0 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0   | 0      | 0      | 0 |
| TOTAL                          |                |     | 400                             | 600                  | 0                  | 6,000              | 2,400  | 10,250          | 700         | 7,600                       | 10,560                          | 13,600                 | 77,000                       | 4,950               | 5,000               | 13,170                 | 32,000                   | 140                     | 93,000                     | 50,718           | 0          | 4,260        | 63,180     | 5,863      | 6,185      | 25,050         | 13,300      | 1,820      | 48,000 | 300             | 43,500       | 540,566   |       |        |   |       |        |   |   |   |   |   |       |   |   |   |     |        |        |   |

540,586

**CUADRO N° 21-7A**  
**REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE TACNA**

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                        | INSTRUMENTOS DE REGISTRO   |                  |            |              |            |            |            |                |             |            |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|
|    |          |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDRÓTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |

**RED DE ESTACIONES DE SENAMHI**

|    |                 |     |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
|----|-----------------|-----|---|--|--|---|---|--|---|--|--|--|---|---|---|--|--|---|--|---|---|---|--|---|---|---|---|---|--|---|
| 1  | Calana          | CP  |   |  |  | 1 | 1 |  |   |  |  |  | 1 | 1 |   |  |  |   |  | 3 | 1 |   |  |   |   | 1 | 1 |   |  |   |
| 2  | Moquegua        | CP  |   |  |  | 1 | 1 |  | 1 |  |  |  |   |   |   |  |  | 2 |  |   | 1 |   |  |   |   |   |   |   |  |   |
| 3  | Aricota         | CO  |   |  |  | 1 |   |  |   |  |  |  |   |   | 1 |  |  |   |  |   |   |   |  |   |   | 1 |   | 1 |  |   |
| 4  | Bocatoma        | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   | 1 |   | 1 |   |  |   |
| 5  | Candarave       | CO  | 1 |  |  | 1 | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 6  | Carumas         | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 | 1 |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 7  | Chuapalca       | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 8  | Ilo             | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   | 1 |   |  | 1 |
| 9  | Ilabaya         | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   | 1 |   |   |  | 1 |
| 10 | Ite             | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 11 | Locumba         | CO  | 1 |  |  | 1 | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 12 | Omate           | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   | 1 |   |   |  | 1 |
| 13 | Palca           | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   | 1 |   | 1 |   |  | 1 |
| 14 | Pampa Umalzo    | CO  | 1 |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 15 | Paucarani       | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   | 1 |   | 1 |   |  |   |
| 16 | Punta Coles     | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 | 1 |   |  |  |   |  |   |   |   |  | 1 |   |   |   |   |  | 1 |
| 17 | Puquina         | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 18 | Quinistaquillas | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 19 | Sama Grande     | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   | 1 |   |   |   |  | 1 |
| 20 | Susapaya        | CO  |   |  |  | 1 | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   | 1 |   |   |   |  | 1 |
| 21 | Tarata          | CO  |   |  |  |   | 1 |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 22 | Vilacota        | CO  |   |  |  | 1 |   |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  | 1 |
| 23 | Torata Yacango  | CO  |   |  |  |   | 1 |  | 1 |  |  |  | 1 |   |   |  |  |   |  |   |   |   |  | 1 |   |   |   |   |  | 1 |
| 24 | Cairani         | PE  |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 25 | Calientes       | PE  |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 26 | Talabaya        | PE  |   |  |  | 1 |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 27 | Calacoa         | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 28 | Challapalca     | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   | 1 |   |  |   |
| 29 | La Frontera     | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 30 | Otora           | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   | 1 |   |  |   |
| 31 | Sitajara        | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   | 1 |   |  |   |
| 32 | Toquela         | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 33 | Tumilaca        | PLU |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   | 1 |   |  |   |
| 34 | Bocatoma        | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 35 | Chuapalca       | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   | 1 |  |   |   |   |   |   |  |   |
| 36 | Coruca          | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 37 | La Frontera     | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   | 1 |   |  |   |   |   |   |   |  |   |
| 38 | Otora           | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  |   |   |   |   |   |  |   |
| 39 | Tumilaca        | HLG |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  | 1 |   |   |   |   |  |   |
| 40 | Vilacota        | HLM |   |  |  |   |   |  |   |  |  |  |   |   |   |  |  |   |  |   |   |   |  | 1 |   |   |   |   |  |   |

**RED DE ESTACIONES POR CONVENIO**

|              |               |     |   |   |   |   |   |    |   |    |   |   |    |   |   |    |   |   |   |   |   |   |    |   |   |   |   |   |    |   |   |
|--------------|---------------|-----|---|---|---|---|---|----|---|----|---|---|----|---|---|----|---|---|---|---|---|---|----|---|---|---|---|---|----|---|---|
| 1            | Jorge Basadre | MAP |   |   |   | 1 | 1 |    | 1 |    |   |   | 1  |   |   | 2  |   |   | 1 | 1 | 1 |   |    |   |   |   |   |   |    | 1 | 1 |
| 2            | La Yarada     | CP  |   |   |   |   | 1 |    |   |    |   | 1 | 3  | 1 |   |    |   |   |   | 1 | 1 |   |    |   |   |   | 1 | 1 |    |   |   |
| <b>TOTAL</b> |               |     | 3 | 0 | 0 | 4 | 5 | 24 | 1 | 21 | 0 | 1 | 21 | 3 | 1 | 10 | 2 | 0 | 4 | 1 | 1 | 4 | 11 | 2 | 0 | 1 | 8 | 0 | 17 | 1 | 1 |



CUADRO N° 21-7B  
REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE TACNA

| N° | ESTACION    | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                |             | TOTAL |            |                 |             |           |   |   |   |        |
|----|-------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|-------|------------|-----------------|-------------|-----------|---|---|---|--------|
|    |             |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO |       | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |   |   |   |        |
| 29 | La Frontera | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0      |
| 30 | Otora       | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 6,650          | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 31 | Sitajara    | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 32 | Toquela     | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 33 | Tumilaca    | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 34 | Bocatoma    | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 35 | Chupalca    | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 31,000 |
| 36 | Coruca      | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 37 | La Frontera | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 31,000 |
| 38 | Otora       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 |        |
| 39 | Tumilaca    | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 31,000 |
| 40 | Vilacota    | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 31,000                   | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0     | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 31,000 |

RED DE ESTACIONES POR CONVENIO

|                  |               |     |     |   |   |       |       |       |     |       |   |       |        |       |       |        |        |   |         |        |       |        |        |       |   |       |        |   |        |     |       |            |   |        |
|------------------|---------------|-----|-----|---|---|-------|-------|-------|-----|-------|---|-------|--------|-------|-------|--------|--------|---|---------|--------|-------|--------|--------|-------|---|-------|--------|---|--------|-----|-------|------------|---|--------|
| 1                | Jorge Basadre | MAP | 0   | 0 | 0 | 0     | 200   | 250   | 0   | 200   | 0 | 0     | 2,200  | 0     | 0     | 4,390  | 0      | 0 | 0       | 25,359 | 0     | 4,260  | 0      | 1,961 | 0 | 0     | 0      | 0 | 0      | 100 | 4,600 | 43,520     |   |        |
| 2                | La Yarada     | CP  | 0   | 0 | 0 | 0     | 0     | 250   | 0   | 0     | 0 | 0     | 0      | 0     | 5,000 | 6,585  | 8,000  | 0 | 0       | 0      | 0     | 4,260  | 0      | 0     | 0 | 8,350 | 6,650  | 0 | 0      | 0   | 0     | 0          | 0 | 39,095 |
| <b>SUB TOTAL</b> |               |     | 600 | 0 | 0 | 4,000 | 1,000 | 6,000 | 350 | 4,200 | 0 | 1,700 | 46,200 | 2,970 | 5,000 | 21,950 | 16,000 | 0 | 124,000 | 25,359 | 8,200 | 17,040 | 26,730 | 3,922 | 0 | 8,350 | 53,200 | 0 | 33,320 | 100 | 4,600 | 414,791.00 |   |        |



| N° | ESTACION               | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                       |                            |                  |            |              |            |            |            |                | TOTAL |             |            |                 |              |           |        |
|----|------------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|-----------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|------------|-----------------|--------------|-----------|--------|
|    |                        |     | TERMOMETRO DE MÁXIMA            | TERMOMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMINÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIONMETRO | LISIMETRO |        |
| 1  | Genaro Herrera         | CP  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 0                   | 5.000               | 2.195                  | 8.000                    | 0                     | 0                          | 0                | 8.200      | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         | 26.045 |
| 2  | Mazán                  | CP  | 200                             | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 0                   | 5.000               | 0                      | 8.000                    | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 1.961      | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         | 18.041 |
| 3  | Moralillo              | CP  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 0                   | 5.000               | 0                      | 8.000                    | 0                     | 0                          | 0                | 8.200      | 0            | 0          | 0          | 0          | 8.350          | 6.650 | 0           | 1.960      | 0               | 0            | 38.610    |        |
| 4  | Amazonas               | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 450          |           |        |
| 5  | Angamos                | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 350                  | 200                         | 960                             | 0                      | 2.200                        | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 1.961      | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 9.341     |        |
| 6  | Cabalococha            | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 1.440        |           |        |
| 7  | Contamana              | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 1.440        |           |        |
| 8  | El Estrecho            | CO  | 0                               | 0                    | 0                  | 1.000              | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 6.650          | 0     | 1.960       | 0          | 0               | 13.250       |           |        |
| 9  | Juancito               | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 1.440        |           |        |
| 10 | Nauta                  | CO  | 200                             | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 0          | 0          | 0              | 6.650 | 0           | 1.960      | 0               | 0            | 13.890    |        |
| 11 | Pevas                  | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 450          |           |        |
| 12 | Requena                | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 0          | 0          | 0              | 0     | 0           | 1.960      | 0               | 0            | 7.040     |        |
| 13 | San Lorenzo            | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 0          | 0          | 0              | 0     | 0           | 1.960      | 0               | 0            | 7.040     |        |
| 14 | San Roque              | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 1.961      | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 3.401     |        |
| 15 | Santa Clotilde         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 450          |           |        |
| 16 | Tamshiyacu             | CO  | 200                             | 0                    | 0                  | 0                  | 0  | 250             | 0                    | 200                         | 0                               | 0                      | 2.200                        | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 1.961      | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 8.231     |        |
| 17 | Trompeteros            | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 350                  | 200                         | 0                               | 0                      | 2.200                        | 990                 | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 2.430      | 0          | 0          | 0              | 0     | 0           | 1.960      | 0               | 0            | 8.380     |        |
| 18 | Bagazán                | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 19 | Bretaña                | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 20 | Bellavista             | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 21 | Francisco de Orellana  | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 22 | Flor de Punga          | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 23 | La Libertad            | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 24 | Manifé                 | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 25 | Punchana               | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 26 | Santa Cruz             | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 27 | Santa María Nanay      | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         |        |
| 28 | San Regis              | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         |        |
| 29 | Santa Rita de Castilla | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 30 | Santa Rosa             | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 6.650     |        |
| 31 | Tamanco                | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 32 | Timicurillo            | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 350                  | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 6.650 | 0           | 0          | 0               | 0            | 7.000     |        |
| 33 | Bellavista             | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         |        |
| 34 | Borja                  | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                     | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0            | 0         |        |

| N° | ESTACION          | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |            |                 |             |           |   |   |   |   |   |     |
|----|-------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|------------|-----------------|-------------|-----------|---|---|---|---|---|-----|
|    |                   |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTERMÓMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |   |   |   |   |   |     |
| 35 | Contamana         | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 36 | Flor de Punga     | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 37 | La Libertad       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 38 | Requena           | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 39 | San Lorenzo       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 280                      | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 280 |
| 40 | San Regis         | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 41 | Santa Clotilde    | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 42 | Santa Cruz        | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 43 | Santa María Nanay | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 44 | Santa Rosa        | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 45 | Seda - Loreto     | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 46 | Tamshiyacu        | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 47 | Timicurillo       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 48 | Nauta             | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 49 | Colonia Angamos   | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |
| 50 | El Estrecho       | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         | 0 | 0 | 0 | 0 | 0 | 0   |

**RED DE ESTACIONES POR CONVENIO**

|       |                 |     |     |   |   |       |   |       |       |       |       |   |        |       |        |       |        |     |   |   |        |   |        |       |        |       |         |   |        |   |   |   |   |   |   |   |   |            |   |       |       |
|-------|-----------------|-----|-----|---|---|-------|---|-------|-------|-------|-------|---|--------|-------|--------|-------|--------|-----|---|---|--------|---|--------|-------|--------|-------|---------|---|--------|---|---|---|---|---|---|---|---|------------|---|-------|-------|
| 1     | Morona          | CO  | 0   | 0 | 0 | 0     | 0 | 250   | 350   | 200   | 0     | 0 | 2,200  | 990   | 0      | 0     | 0      | 0   | 0 | 0 | 0      | 0 | 0      | 0     | 0      | 0     | 0       | 0 | 0      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0          | 0 | 8,380 |       |
| 2     | Puerto Almendra | CO  | 0   | 0 | 0 | 0     | 0 | 250   | 0     | 200   | 960   | 0 | 2,200  | 990   | 0      | 0     | 0      | 0   | 0 | 0 | 0      | 0 | 0      | 0     | 0      | 0     | 0       | 0 | 0      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0          | 0 | 0     | 6,560 |
| 3     | Enapu - Perú    | HLM | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0      | 0     | 0      | 0     | 0      | 0   | 0 | 0 | 0      | 0 | 0      | 0     | 0      | 0     | 0       | 0 | 0      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0          | 0 | 6,185 |       |
| 4     | Trompeteros     | HLM | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0      | 0     | 0      | 0     | 0      | 0   | 0 | 0 | 0      | 0 | 0      | 0     | 0      | 0     | 0       | 0 | 0      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0          | 0 | 6,185 |       |
| Total |                 |     | 600 | 0 | 0 | 1,000 | 0 | 4,750 | 3,150 | 3,800 | 1,920 | 0 | 22,000 | 9,900 | 15,000 | 2,195 | 24,000 | 280 | 0 | 0 | 16,400 | 0 | 19,440 | 7,844 | 12,370 | 8,350 | 106,400 | 0 | 15,680 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 275,079.00 |   |       |       |



| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |             |                             |                                 |                        |                              |                     |                     |                        |             | INSTRUMENTOS DE REGISTRO |                            |                  |            |              |            |            |            |                |             |            |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|--------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|
|    |          |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMETRICA (m)    | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |

RED DE ESTACIONES DE SENAMHI

|    |                          |     |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
|----|--------------------------|-----|--|--|--|--|---|---|---|--|--|--|--|--|--|--|---|---|---|---|--|---|---|---|---|---|--|--|---|--|--|--|--|---|---|--|
| 1  | El Porvenir              | MAP |  |  |  |  | 1 | 1 |   |  |  |  |  |  |  |  |   | 2 |   |   |  | 1 |   |   |   |   |  |  |   |  |  |  |  | 1 | 1 |  |
| 2  | San Ramón                | CP  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  | 1 | 1 | 3 | 1 |  | 1 |   |   | 1 |   |  |  |   |  |  |  |  |   |   |  |
| 3  | Alao                     | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 4  | Bellavista               | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 5  | Campanilla               | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  | 1 |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 6  | José de Olaya (Dos Mayo) | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 7  | La Unión                 | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 8  | Lamas                    | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  | 1 |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 9  | Moyobamba                | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  | 1 |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 10 | Naranjillo               | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 11 | Navarro                  | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  | 1 |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 12 | Pongo de Caynarachi      | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 13 | Pachiza                  | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 14 | Rioja                    | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 15 | San Antonio              | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 16 | San Pablo                | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 17 | Saposa                   | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 18 | Sauce                    | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 19 | Soritor                  | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   | 1 |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 20 | Tabalosos                | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   | 1 |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 21 | Tarapoto                 | CO  |  |  |  |  | 1 |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   | 1 |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 22 | Tingo de Ponaza          | CO  |  |  |  |  | 1 |   | 1 |  |  |  |  |  |  |  |   |   |   |   |  |   |   | 1 |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 23 | Cuñumbuque               | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 24 | Cuzco                    | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 25 | Chazuta                  | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 26 | Huayabamba               | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 27 | Jepelacio                | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 28 | Nuevo Lima               | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 29 | Pacayzapa                | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 30 | Pelejo                   | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 31 | Picota                   | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 32 | Pilluana                 | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 33 | Pucallpa                 | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 34 | Shanao                   | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  | 1 |   |  |
| 35 | Shanusi                  | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 36 | Shambozacu               | PLU |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   | 1 |  |
| 37 | Biavo Cusco              | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 38 | Cumbaza                  | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 39 | Huayabamba               | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   | 1 |  |  |   |  |  |  |  |   |   |  |
| 40 | Picota                   | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   | 1 |  |  |   |  |  |  |  |   |   |  |
| 41 | Shambozacu               | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   | 1 |   |   |  |  |   |  |  |  |  |   |   |  |
| 42 | Shanao                   | HLG |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 43 | Campanilla               | HLM |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 44 | Chazuta                  | HLM |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  |   |  |  |  |  |   |   |  |
| 45 | Laguna Sauce             | HLM |  |  |  |  |   |   |   |  |  |  |  |  |  |  |   |   |   |   |  |   |   |   |   |   |  |  | 1 |  |  |  |  |   |   |  |

RED DE ESTACIONES POR CONVENIO

|           |                       |     |   |   |   |   |   |    |   |   |   |   |    |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |    |   |   |  |  |  |  |  |
|-----------|-----------------------|-----|---|---|---|---|---|----|---|---|---|---|----|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|----|---|---|--|--|--|--|--|
| 1         | Valle de la Conquista | CO  |   |   |   |   |   |    |   |   |   |   |    |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |    |   |   |  |  |  |  |  |
| 2         | Tioyacu               | HLG |   |   |   |   |   |    |   |   |   |   |    |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |    |   |   |  |  |  |  |  |
| SUB TOTAL |                       |     | 0 | 0 | 0 | 0 | 1 | 22 | 1 | 6 | 0 | 0 | 14 | 0 | 1 | 5 | 1 | 0 | 2 | 1 | 1 | 0 | 12 | 0 | 3 | 1 | 9 | 0 | 17 | 1 | 1 |  |  |  |  |  |

**CUADRO N° 21-9B**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE SAN MARTIN**

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|
|    |          |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO |

**RED DE ESTACIONES DE SENAMHI**

|    |                         |     |   |   |   |   |     |     |     |     |   |   |       |   |       |       |       |   |        |   |       |       |   |   |       |       |   |       |     |       |        |        |
|----|-------------------------|-----|---|---|---|---|-----|-----|-----|-----|---|---|-------|---|-------|-------|-------|---|--------|---|-------|-------|---|---|-------|-------|---|-------|-----|-------|--------|--------|
| 1  | El Porvenir             | MAP | 0 | 0 | 0 | 0 | 200 | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 4,390 | 0     | 0     | 0 | 25,359 | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 100 | 4,600 | 34,899 |        |
| 2  | San Ramón               | CP  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 5,000 | 6,585 | 8,000 | 0 | 0      | 0 | 8,200 | 0     | 0 | 0 | 0     | 8,350 | 0 | 0     | 0   | 0     | 0      | 38,585 |
| 3  | Alao                    | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 4,640  |        |
| 4  | Bellavista              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 4,410  |        |
| 5  | Campanilla              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 7,040  |        |
| 6  | José de Olaya(Dos Mayo) | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 2,410  |        |
| 7  | La Unión                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 2,210  |        |
| 8  | Lamas                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 6,840  |        |
| 9  | Moyobamba               | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 0     | 4,880  |        |
| 10 | Naranjillo              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 250   |        |        |
| 11 | Navarro                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 350 | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 7,190  |        |
| 12 | Pongo de Caynarachi     | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 2,210  |        |
| 13 | Pachiza                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 250   |        |        |
| 14 | Rioja                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 7,040  |        |
| 15 | San Antonio             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 6,840  |        |
| 16 | San Pablo               | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 7,040  |        |
| 17 | Saposa                  | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 6,840  |        |
| 18 | Sauce                   | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 4,610  |        |
| 19 | Soritor                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 6,840  |        |
| 20 | Tabalosos               | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 6,840  |        |
| 21 | Tarapoto                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 2,210  |        |
| 22 | Tingo de Ponaza         | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0   | 200 | 0 | 0 | 2,200 | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 2,430 | 0 | 0 | 0     | 0     | 0 | 1,960 | 0   | 0     | 7,040  |        |
| 23 | Cuñumbuque              | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 6,650 | 0     | 0 | 0     | 0   | 0     | 6,650  |        |
| 24 | Cuzco                   | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 6,650 | 0     | 0 | 0     | 0   | 0     | 6,650  |        |
| 25 | Chazuta                 | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 0     | 0      |        |
| 26 | Huayabamba              | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 0     | 0      |        |
| 27 | Jepelacio               | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0     | 0   | 0     | 0      |        |
| 28 | Nuevo Lima              | PLU | 0 | 0 | 0 | 0 | 0   | 0   | 0   | 0   | 0 | 0 | 0     | 0 | 0     | 0     | 0     | 0 | 0      | 0 | 0     | 0     | 0 | 0 | 6,650 | 0     | 0 | 0     | 0   | 0     | 6,650  |        |

**CUADRO N° 21-9B**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE SAN MARTIN**

| N° | ESTACION     | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |            |                 |             |           |       |
|----|--------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|------------|-----------------|-------------|-----------|-------|
|    |              |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |       |
| 29 | Pacayzapa    | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 6,650          | 0     | 0           | 0          | 0               | 0           | 0         | 6,650 |
| 30 | Pelejo       | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 0         |       |
| 31 | Picota       | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 6,650          | 0     | 0           | 0          | 0               | 0           | 6,650     |       |
| 32 | Pilluana     | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0     | 0           | 0          | 0               | 6,650       |           |       |
| 33 | Pucallpa     | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0     | 0           | 0          | 0               | 6,650       |           |       |
| 34 | Shanao       | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0     | 0           | 0          | 0               | 6,650       |           |       |
| 35 | Shanusi      | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           |           |       |
| 36 | Shamboayacu  | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0     | 0           | 0          | 0               | 6,650       |           |       |
| 37 | Biavo Cusco  | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           |           |       |
| 38 | Cumbaza      | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 6,185      | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           | 6,185     |       |
| 39 | Huayabamba   | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 6,185        | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 6,185       |           |       |
| 40 | Picota       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 31,000      |           |       |
| 41 | Shamboayacu  | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 31,000      |           |       |
| 42 | Shanao       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           |           |       |
| 43 | Campanilla   | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 6,185        | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 6,185       |           |       |
| 44 | Chazuta      | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           |           |       |
| 45 | Laguna Sauce | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0                        | 0                      | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0     | 0           | 0          | 0               | 0           |           |       |

**RED DE ESTACIONES POR CONVENIO**

|                  |                       |     |   |   |   |   |     |       |     |       |   |   |        |   |       |       |       |   |        |        |       |   |        |   |        |       |        |   |        |     |       |         |
|------------------|-----------------------|-----|---|---|---|---|-----|-------|-----|-------|---|---|--------|---|-------|-------|-------|---|--------|--------|-------|---|--------|---|--------|-------|--------|---|--------|-----|-------|---------|
| 1                | Valle de la conquista | CO  | 0 | 0 | 0 | 0 | 0   | 0     | 0   | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0     | 0 | 0      | 0      | 0     | 0 | 0      | 0 | 0      | 0     | 0      | 0 | 0      | 0   | 0     | 0       |
| 2                | Tioyacu               | HLG | 0 | 0 | 0 | 0 | 0   | 0     | 0   | 0     | 0 | 0 | 0      | 0 | 0     | 0     | 0     | 0 | 0      | 0      | 0     | 0 | 0      | 0 | 0      | 0     | 0      | 0 | 0      | 0   | 0     | 0       |
| <b>SUB TOTAL</b> |                       |     | 0 | 0 | 0 | 0 | 200 | 5,500 | 350 | 1,200 | 0 | 0 | 30,800 | 0 | 5,000 | ##### | 8,000 | 0 | 62,000 | 25,359 | 8,200 | 0 | 29,160 | 0 | 18,555 | 8,350 | 59,850 | 0 | 33,320 | 100 | 4,600 | 311,519 |



| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                     |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                | TOTAL |             |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|---------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------|-------------|
|    |          |     | TERMOMETRO DE MAXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUJEO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2 | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO |       | PLUVIOGRAFO |

RED DE ESTACIONES DE SENAMHI

|    |                         |     |   |   |   |   |     |     |   |     |     |       |       |   |       |   |       |        |   |   |   |       |       |       |       |   |   |   |       |   |   |   |   |     |       |        |        |
|----|-------------------------|-----|---|---|---|---|-----|-----|---|-----|-----|-------|-------|---|-------|---|-------|--------|---|---|---|-------|-------|-------|-------|---|---|---|-------|---|---|---|---|-----|-------|--------|--------|
| 1  | Tulumayo                | MAP | 0 | 0 | 0 | 0 | 200 | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 5,000 | 0 | 8,000 | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 100 | 4,600 | 18,150 |        |
| 2  | Tananta                 | CP  | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 5,000 | 0 | 8,000 | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 8,350 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 21,350 |        |
| 3  | Tingo Maria             | CP  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 5,000 | 0 | 8,000 | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 13,250 |        |
| 4  | Aguaytia                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 1,950  |        |
| 5  | Aucayacu                | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 200 | 0   | 1,700 | 2,200 | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 1,981 | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 6,311  |        |
| 6  | Canchán                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 1,950 |        |        |
| 7  | Carpish                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 200 | 0   | 1,700 | 2,200 | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 2,430 | 0     | 0     | 0     | 0 | 0 | 0 | 1,980 | 0 | 0 | 0 | 0 | 0   | 8,740 |        |        |
| 8  | Chaglla                 | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 250   |        |        |
| 9  | Dos de Mayo             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 250    |        |
| 10 | El Maronal              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 1,950  |        |
| 11 | Jacas Chico             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 200 | 0   | 1,700 | 2,200 | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 2,430 | 1,981 | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 8,741  |        |
| 12 | La Divisoria            | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 1,950  |        |
| 13 | Las Palmeras de Ucayali | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 2,200 | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 2,450  |        |
| 14 | Puerto Inca             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 250    |        |
| 15 | San Alejandro           | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      | 1,950  |
| 16 | San Rafael              | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 200 | 960 | 1,700 | 2,200 | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 2,430 | 0     | 0     | 0     | 0 | 0 | 0 | 1,980 | 0 | 0 | 0 | 0 | 0   | 0     | 9,700  |        |
| 17 | Tournavista             | CO  | 0 | 0 | 0 | 0 | 0   | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 250    |        |
| 18 | Puente Tocache          | HLG | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 31,000 | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 31,000 |        |
| 19 | Tingo Maria             | HLG | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      |        |
| 20 | Puente Aguaytia         | HLM | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 6,185 | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      | 37,185 |
| 21 | Puente Higueras         | HLM | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      |        |
| 22 | Puerto Inca             | HLM | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      |        |
| 23 | San Alejandro           | HLM | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      |        |
| 24 | San Rafael              | HLM | 0 | 0 | 0 | 0 | 0   | 0   | 0 | 0   | 0   | 0     | 0     | 0 | 0     | 0 | 0     | 0      | 0 | 0 | 0 | 0     | 0     | 0     | 0     | 0 | 0 | 0 | 0     | 0 | 0 | 0 | 0 | 0   | 0     | 0      |        |

RED DE ESTACIONES POR CONVENIO

|           |          |    |   |   |   |   |     |       |   |       |     |        |        |       |        |       |        |   |        |       |       |   |       |       |       |        |   |   |       |     |       |   |   |            |        |
|-----------|----------|----|---|---|---|---|-----|-------|---|-------|-----|--------|--------|-------|--------|-------|--------|---|--------|-------|-------|---|-------|-------|-------|--------|---|---|-------|-----|-------|---|---|------------|--------|
| 1         | Pucallpa | CP | 0 | 0 | 0 | 0 | 0   | 250   | 0 | 0     | 0   | 0      | 0      | 0     | 5,000  | 0     | 8,000  | 0 | 0      | 0     | 0     | 0 | 0     | 0     | 8,350 | 0      | 0 | 0 | 0     | 0   | 0     | 0 | 0 | 0          | 21,600 |
| 2         | Huánuco  | CP | 0 | 0 | 0 | 0 | 0   | 250   | 0 | 200   | 0   | 2,200  | 0      | 5,000 | 6,585  | 8,000 | 0      | 0 | 0      | 8,200 | 0     | 0 | 1,981 | 0     | 8,350 | 0      | 0 | 0 | 0     | 0   | 0     | 0 | 0 | 0          | 40,746 |
| SUB TOTAL |          |    | 0 | 0 | 0 | 0 | 200 | 4,500 | 0 | 1,000 | 960 | 15,300 | 13,200 | 0     | 25,000 | 6,585 | 40,000 | 0 | 62,000 | 0     | 8,200 | 0 | 7,290 | 5,883 | 6,185 | 25,050 | 0 | 0 | 3,920 | 100 | 4,600 | 0 | 0 | 229,973.00 |        |

CUADRO N° 21-11A  
REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO  
DIRECCION REGIONAL DE JUNIN

| N°                             | ESTACION           | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            | INSTRUMENTOS DE REGISTRO |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
|--------------------------------|--------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|-----------------------|----------------------------|--------------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-----------------|-------------|-----------|---|----|---|---|---|
|                                |                    |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMETRICA (m) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO         | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIIGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |   |    |   |   |   |
| RED DE ESTACIONES DE SENAMHI   |                    |     |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 1                              | Santa Ana          | MAP |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       | 1                          | 1                        |            |              | 1          | 1          |            |                |             |            |                 |             |           |   |    | 1 | 1 |   |
| 2                              | Huayao             | CP  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            | 1                        |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 3                              | Acostambo          | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 4                              | Colcabamba         | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 5                              | Comas              | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           | 1                               | 1                      |                              |                     |                     |                        |             |                       |                            |                          |            |              | 1          |            |            |                |             |            |                 |             |           |   |    | 1 |   |   |
| 6                              | Huancapi           | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    | 1 |   |   |
| 7                              | Huancalpi          | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 8                              | Huancavelica       | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 9                              | Huanta             | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 10                             | Huasahuasi         | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 | 1                      |                              |                     |                     |                        |             |                       |                            |                          |            |              | 1          |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 11                             | Ingenio            | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              | 1          | 1          |            |                |             |            |                 |             |           |   |    |   |   |   |
| 12                             | Jauja              | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 13                             | Junín              | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 | 1                      |                              |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    | 1 |   |   |
| 14                             | Laive              | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 15                             | La Oroya           | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 16                             | La Quinua          | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 17                             | Lircay             | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 18                             | Oxapampa           | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 19                             | Pampas             | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              | 1                   |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 20                             | Paucarabamba       | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 21                             | Pichanaki          | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 22                             | Pilchaca           | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 | 1                      |                              |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 23                             | Pozuzo             | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 24                             | Puerto Ocopa       | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 25                             | Ricrán             | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 | 1                      | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 26                             | Runatullo          | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 27                             | Salcabamba         | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 28                             | San Juan de Jarpa  | CO  |                                 |                      |                    |                    |  | 1               |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 29                             | San Pedro de Cachi | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 | 1                      |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 30                             | Satipo             | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 31                             | Tarma              | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 32                             | Vilcashuaman       | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   | 1 |   |
| 33                             | Viques             | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            | 1          |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 34                             | Wayllapampa        | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 35                             | Yanahuanca         | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        | 1                            |                     |                     |                        |             |                       |                            |                          |            | 1            |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 36                             | Shullcas           | PE  |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 37                             | Perene             | PLU |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 38                             | Perene             | HLG |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            | 1          |                |             |            |                 |             |           |   |    |   |   |   |
| 39                             | Pte. Breña         | HLG |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 40                             | Río Cunas          | HLG |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 41                             | Shullcas           | HLM |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                | 1           |            |                 |             |           |   |    |   |   |   |
| RED DE ESTACIONES POR CONVENIO |                    |     |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 1                              | Acobamba           | MAP |                                 |                      |                    |                    |  | 1               | 1           |                             | 1                               | 1                      |                              | 1                   |                     | 1                      |             | 1                     |                            | 1                        |            |              |            | 1          | 1          | 1              |             | 1          |                 |             |           |   |    | 1 |   |   |
| 2                              | Cerro de Pasco     | CO  |                                 |                      |                    |                    |  | 1               | 1           |                             |                                 |                        |                              |                     |                     |                        |             |                       |                            |                          |            |              |            |            |            |                |             |            |                 |             |           |   |    |   |   |   |
| 3                              | San Ramón          | CO  |                                 |                      | 1                  |                    |  | 1               | 1           | 1                           |                                 |                        |                              | 1                   |                     |                        |             |                       |                            |                          |            |              | 1          |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| 4                              | Villa Rica         | CO  |                                 |                      |                    |                    |  | 1               | 1           | 1                           |                                 |                        |                              | 1                   |                     |                        |             |                       |                            |                          |            |              | 1          |            |            |                |             |            |                 |             |           |   |    |   |   | 1 |
| Total                          |                    |     |                                 |                      | 0                  | 1                  | 0  | 0               | 1           | 39                          | 0                               | 32                     | 9                            | 3                   | 22                  | 0                      | 1           | 1                     | 3                          | 0                        | 0          |              |            | 2          | 1          | 2              | 20          | 2          | 2               | 1           | 2         | 0 | 20 | 1 | 2 |   |

**CUADRO N° 21-11B**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE JUNIN**

| N° | ESTACION | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                    |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                |             | TOTAL |
|----|----------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|--------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|-------|
|    |          |     | TERMOMETRO DE MÁXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200cm2 | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMETRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIIGRAFO |       |

**RED DE ESTACIONES DE SENAMHI**

|    |              |     |   |   |   |   |   |     |   |     |     |       |       |   |   |       |       |   |   |        |       |       |       |       |   |   |       |       |       |       |       |       |        |
|----|--------------|-----|---|---|---|---|---|-----|---|-----|-----|-------|-------|---|---|-------|-------|---|---|--------|-------|-------|-------|-------|---|---|-------|-------|-------|-------|-------|-------|--------|
| 1  | Santa Ana    | MAP | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 2,195 | 8,000 | 0 | 0 | 25,359 | 0     | 4,260 | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 100   | 4,600 | 44,964 |
| 2  | Huayao       | CP  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 8,000 | 0 | 0 | 0      | 8,200 | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 0     | 4,600 | 21,250 |
| 3  | Acostambo    | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 0     | 250   |        |
| 4  | Colcabamba   | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 0     | 250   |        |
| 5  | Comas        | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 1,700 | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 0     | 1,960 | 0     | 0     | 9,700 |        |
| 6  | Huancapi     | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 4,610 |       |        |
| 7  | Huancalpi    | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0   | 0   | 1,700 | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 1,950 |       |        |
| 8  | Huancavelica | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 450   |       |        |
| 9  | Huanta       | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 250   |       |        |
| 10 | Huasahuasi   | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 0     | 5,080 |        |
| 11 | Ingerio      | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 1,961 | 0 | 0 | 0     | 0     | 0     | 0     | 0     | 4,841 |        |
| 12 | Jauja        | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 450   |       |        |
| 13 | Jurín        | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |       |        |
| 14 | Laive        | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |       |        |
| 15 | La Oroya     | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 1,960 | 0     | 0     | 4,610 |       |       |        |
| 16 | La Quimua    | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |       |        |
| 17 | Lircay       | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 450   |       |        |
| 18 | Oxapampa     | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 450   |       |        |
| 19 | Pampas       | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 7,040 |       |        |
| 20 | Paucarbamba  | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |       |        |
| 21 | Pichanaki    | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0   | 0   | 0     | 0     | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 0     | 0     | 0 | 0 | 0     | 0     | 0     | 0     | 250   |       |        |
| 22 | Pilchaca     | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |       |        |
| 23 | Pozuzo       | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |       |        |
| 24 | Puerto Ocopa | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 960 | 0     | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,000 |       |        |
| 25 | Ricrán       | CO  | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 200 | 0   | 1,700 | 2,200 | 0 | 0 | 0     | 0     | 0 | 0 | 0      | 0     | 0     | 2,430 | 0     | 0 | 0 | 0     | 1,960 | 0     | 0     | 8,740 |       |        |







| N° | ESTACION | CAT. | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |                      |                             |                                 |                        |                              |                     |                     |                        | INSTRUMENTOS DE REGISTRO |                        |                            |                  |            |              |            |            |            |                |             | TOTAL |
|----|----------|------|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|-------|
|    |          |      | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO              | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO |       |

RED DE ESTACIONES DE SENAMHI

|    |                  |     |     |     |   |       |     |     |     |     |     |       |       |   |       |       |       |   |   |        |       |   |       |       |       |       |   |       |     |        |        |        |
|----|------------------|-----|-----|-----|---|-------|-----|-----|-----|-----|-----|-------|-------|---|-------|-------|-------|---|---|--------|-------|---|-------|-------|-------|-------|---|-------|-----|--------|--------|--------|
| 1  | Abancay          | MAP | 0   | 0   | 0 | 0     | 200 | 250 | 0   | 200 | 0   | 1,700 | 0     | 0 | 0     | 4,390 | 0     | 0 | 0 | 25,359 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 100 | 4,600  | 36,799 |        |
| 2  | Granja Kcayra    | MAP | 0   | 0   | 0 | 0     | 200 | 0   | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 4,390 | 8,000 | 0 | 0 | 25,359 | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 100 | 4,600  | 42,649 |        |
| 3  | Aclanaco         | MAP | 0   | 200 | 0 | 0     | 0   | 0   | 0   | 200 | 0   | 0     | 2,200 | 0 | 5,000 | 4,390 | 8,000 | 0 | 0 | 0      | 8,200 | 0 | 0     | 0     | 0     | 8,350 | 0 | 0     | 0   | 0      | 0      | 36,540 |
| 4  | Pakitza          | MAP | 0   | 0   | 0 | 0     | 0   | 0   | 0   | 200 | 0   | 0     | 0     | 0 | 5,000 | 4,390 | 8,000 | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 8,350 | 0     | 0 | 0     | 0   | 0      | 25,940 |        |
| 5  | Puerto Maldonado | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 2,200 | 0 | 5,000 | 6,585 | 8,000 | 0 | 0 | 0      | 8,200 | 0 | 0     | 0     | 8,350 | 0     | 0 | 0     | 0   | 0      | 38,785 |        |
| 6  | Quillabamba      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 0     | 0 | 5,000 | 6,585 | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 8,350 | 0     | 0     | 0 | 0     | 0   | 20,385 |        |        |
| 7  | Salvación        | MAP | 0   | 0   | 0 | 0     | 0   | 0   | 350 | 0   | 0   | 0     | 0     | 0 | 5,000 | 0     | 8,000 | 0 | 0 | 0      | 0     | 0 | 0     | 8,350 | 0     | 0     | 0 | 0     | 0   | 21,700 |        |        |
| 8  | Urubamba         | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 5,000 | 0     | 8,000 | 0 | 0 | 0      | 0     | 0 | 0     | 8,350 | 0     | 0     | 0 | 0     | 0   | 21,600 |        |        |
| 9  | Talavera         | MAP | 0   | 0   | 0 | 1,000 | 0   | 0   | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 1,000  |        |        |
| 10 | Acomayo          | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 11 | Andahuaylas      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 1,960 | 0   | 4,610  |        |        |
| 12 | Anta Ancachuro   | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 960 | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 2,430 | 0     | 0     | 0     | 0 | 1,960 | 0   | 8,000  |        |        |
| 13 | Cay Cay          | MAP | 200 | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 650    |        |        |
| 14 | Ccatcca          | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 15 | Chalhuanca       | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 450    |        |        |
| 16 | Challabamba      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 17 | Chontachaca      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 960 | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 1,961 | 0     | 0     | 0     | 0 | 0     | 0   | 5,571  |        |        |
| 18 | Colquepata       | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 19 | Curahuasi        | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 960 | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 3,610  |        |        |
| 20 | Iñapari          | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 21 | La Quebrada      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 450    |        |        |
| 22 | Pampas           | MAP | 0   | 0   | 0 | 0     | 0   | 0   | 0   | 200 | 960 | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 2,430 | 0     | 0     | 0     | 0 | 1,960 | 0   | 7,750  |        |        |
| 23 | Paruro           | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 0   | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 2,430 | 1,961 | 0     | 0     | 0 | 0     | 0   | 7,041  |        |        |
| 24 | Faucartambo      | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 200 | 960 | 0     | 2,200 | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 2,430 | 0     | 0     | 0     | 0 | 1,960 | 0   | 8,000  |        |        |
| 25 | Pisac            | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 26 | Pomacanchi       | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 27 | Quincemil        | MAP | 0   | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 250    |        |        |
| 29 | Santo Tomas      | MAP | 200 | 0   | 0 | 0     | 0   | 250 | 0   | 0   | 0   | 0     | 0     | 0 | 0     | 0     | 0     | 0 | 0 | 0      | 0     | 0 | 0     | 0     | 0     | 0     | 0 | 0     | 0   | 450    |        |        |

| N°                                    | ESTACION                 | CAT. | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |                      |                             |                                 |                        |                              |                     |                     |                        |             | INSTRUMENTOS DE REGISTRO |                            |                  |            |              |            |            |            |                |             |            | TOTAL |                 |             |           |       |         |        |       |  |
|---------------------------------------|--------------------------|------|---------------------------------|----------------------|--------------------|--------------------|--|------------------|----------------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|--------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-------|-----------------|-------------|-----------|-------|---------|--------|-------|--|
|                                       |                          |      | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO 200 Cm2. | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMINIMÉTRICA (m.)  | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |       | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |       |         |        |       |  |
| 30                                    | Sicuani                  | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 250              | 0                    | 200                         | 0                               | 0                      | 0                            | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 0      | 1,440 |  |
| 31                                    | Tambobamba               | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 250              | 0                    | 0                           | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 2,450  |       |  |
| 32                                    | Yauri                    | MAP  | 0                               | 200                  | 0                  | 0                  | 0  | 250              | 0                    | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 1,961      | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 4,811  |       |  |
| 33                                    | Cunyac                   | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 6,650          | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 6,650   |        |       |  |
| 34                                    | Chaclabamba              | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 6,650      | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 6,650 |         |        |       |  |
| 35                                    | Chaclabamba              | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 210         | 0                        | 0                          | 0                | 0          | 0            | 0          | 6,185      | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 6,395 |         |        |       |  |
| 36                                    | Chontachaca              | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       |        |       |  |
| 37                                    | Huatanay                 | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       |        |       |  |
| 38                                    | Marcelino Serna (Pampas) | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       |        |       |  |
| 39                                    | Paucartambo              | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 0      |       |  |
| 40                                    | Pisac                    | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 210     | 210    |       |  |
| 41                                    | Puente Cunyac            | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 31,000  | 31,000 |       |  |
| 42                                    | Puente Colca             | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 0                | 0                    | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 210   | 210     |        |       |  |
| <b>RED DE ESTACIONES POR CONVENIO</b> |                          |      |                                 |                      |                    |                    |  |                  |                      |                             |                                 |                        |                              |                     |                     |                        |             |                          |                            |                  |            |              |            |            |            |                |             |            |       |                 |             |           |       |         |        |       |  |
| 1                                     | Curpahuasi               | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 250              | 0                    | 200                         | 960                             | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 1,961      | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 5,571  |       |  |
| 2                                     | Machupichu               | MAP  | 0                               | 0                    | 0                  | 0                  | 0  | 250              | 0                    | 200                         | 960                             | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 0           | 0         | 0     | 0       | 3,610  |       |  |
| Total                                 |                          |      | 400                             | 400                  | 0                  | 1,000              | 400  | 6,750            | 350                  | 3,800                       | 6,720                           | 1,700                  | 28,600                       | 990                 | 30,000              | 30,730                 | 48,000      | 630                      | 31,000                     | 50,718           | 16,400     | 0            | 9,720      | 7,844      | 6,185      | 50,100         | 13,300      | 0          | 7,840 | 200             | 9,200       |           |       | 362,977 |        |       |  |



**CUADRO N° 21-13B**  
**REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**  
**DIRECCION REGIONAL DE PUNO**

| N°                                  | ESTACION       | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             | INSTRUMENTOS DE REGISTRO |                            |                  |            |              |            |            |            |                |             |            | TOTAL |                 |              |           |        |
|-------------------------------------|----------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|--------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-------|-----------------|--------------|-----------|--------|
|                                     |                |     | TERMOMETRO DE MÁXIMA            | TERMOMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMÉTRICA (m.)   | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |       | TERMOHIGROGRAFO | TENSIONMETRO | LISIMETRO |        |
| <b>RED DE ESTACIONES DE SENAMHI</b> |                |     |                                 |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                          |                            |                  |            |              |            |            |            |                |             |            |       |                 |              |           |        |
| 1                                   | Chuquibambilla | CP  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 5,000               | 6,585                  | 8,000       | 0                        | 0                          | 0                | 8,200      | 0            | 0          | 1,961      | 0          | 8,350          | 0           | 0          | 0     | 0               | 0            | 0         | 40,746 |
| 2                                   | Puno           | CP  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 1,700                  | 2,200                        | 0                   | 5,000               | 4,390                  | 8,000       | 0                        | 0                          | 0                | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0     | 0               | 0            | 0         | 26,131 |
| 3                                   | Ananea         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 4,610     |        |
| 4                                   | Arapa          | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 5                                   | Ayaviri        | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 2,650        |           |        |
| 6                                   | Azángaro       | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 960                             | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 8,000     |        |
| 7                                   | Cabanillas     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 1,961      | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 7,041        |           |        |
| 8                                   | Capachica      | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 450          |           |        |
| 9                                   | Capazo         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 10                                  | Cojata         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 11                                  | Crucero        | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 12                                  | Cuyo Cuyo      | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 13                                  | Desaguadero    | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 2,650        |           |        |
| 14                                  | Huancané       | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 5,080        |           |        |
| 15                                  | Huaraya Moho   | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 5,080        |           |        |
| 16                                  | Ichuña         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 1,700                  | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 8,740     |        |
| 17                                  | Ilave          | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,820      | 1,960 | 0               | 0            | 8,860     |        |
| 18                                  | Isia Los Uros  | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 1,960 | 0               | 0            | 7,040     |        |
| 19                                  | Isia Soto      | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 200                         | 0                               | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 6,650          | 0           | 1,960      | 0     | 0               | 14,430       |           |        |
| 20                                  | Isia Suana     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 960                             | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 8,990        |           |        |
| 21                                  | Isia Taquile   | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 8,030        |           |        |
| 22                                  | Juli           | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 2,195                  | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 2,645        |           |        |
| 23                                  | Juliaca        | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 1,700                  | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 6,310        |           |        |
| 24                                  | Lagunillas     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 1,961      | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 7,041        |           |        |
| 25                                  | Lampa          | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 0          | 0     | 0               | 5,080        |           |        |
| 26                                  | Laraqueri      | CO  | 0                               | 0                    | 0                  | 1,000              | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 9,030        |           |        |
| 27                                  | Limbani        | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 7,040        |           |        |
| 28                                  | Llally         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 8,030        |           |        |
| 29                                  | Macusani       | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 7,040        |           |        |
| 30                                  | Mañazo         | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                        | 0                          | 0                | 0          | 2,430        | 0          | 0          | 0          | 0              | 0           | 1,960      | 0     | 0               | 7,040        |           |        |

| N°    | ESTACION              | CAT | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                        |                            | INSTRUMENTOS DE REGISTRO |            |              |            |            |            |                |             |            |                 |             | TOTAL |           |   |         |        |
|-------|-----------------------|-----|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|------------------------|----------------------------|--------------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-----------------|-------------|-------|-----------|---|---------|--------|
|       |                       |     | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMETRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO         | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO |       | LISIMETRO |   |         |        |
| 31    | Mazo Cruz             | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 7,041   |        |
| 32    | Muñani                | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 960                             | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 8,001   |        |
| 33    | Ollachea              | CO  | 0                               | 0                    | 0                  | 1,000              | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 8,041   |        |
| 34    | Pampahuta             | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 960                             | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 8,001   |        |
| 35    | Pizacoma              | CO  | 0                               | 0                    | 0                  | 1,000              | 0  | 250             | 350         | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 0          | 0          | 0              | 0           | 0          | 1,820           | 0           | 0     | 0         | 0 | 8,250   |        |
| 36    | Progreso              | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 7,041   |        |
| 37    | Pucará                | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 960                             | 0                      | 2,200                        | 990                 | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 0          | 0          | 0              | 0           | 0          | 0               | 1,960       | 0     | 0         | 0 | 8,990   |        |
| 38    | Putina                | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 1,960           | 0           | 0     | 0         | 0 | 4,610   |        |
| 39    | Rinoón de la Cruz     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 0          | 0          | 0              | 0           | 0          | 0               | 1,960       | 0     | 0         | 0 | 7,040   |        |
| 40    | San Gabán             | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 6,650      | 0               | 0           | 0     | 0         | 0 | 7,100   |        |
| 41    | Sta. Rosa             | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 6,650       | 0          | 0               | 0           | 0     | 0         | 0 | 13,691  |        |
| 42    | Tahuaco - Yunguyo     | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 0          | 0          | 0              | 0           | 0          | 0               | 1,960       | 0     | 0         | 0 | 7,040   |        |
| 43    | Tambopata             | CO  | 0                               | 0                    | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 7,041   |        |
| 44    | Taraco                | CO  | 0                               | 200                  | 0                  | 0                  | 0  | 250             | 0           | 200                         | 0                               | 0                      | 2,200                        | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 2,430      | 1,961      | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 7,241   |        |
| 45    | Chilligua             | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       |        |
| 46    | Ramis                 | PLU | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 6,650       | 0          | 0               | 0           | 0     | 0         | 0 | 6,650   |        |
| 47    | Ayaviri               | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       |        |
| 48    | Coata - Unocolla      | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 6,185      | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 37,185 |
| 49    | Pte Car. Azangaro     | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       |        |
| 50    | Pte Carr. Huancané    | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       |        |
| 51    | Pte Carr. llave       | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 31,000 |
| 52    | Pte Int. Desaguadero  | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 31,000 |
| 53    | Pte Lloroco Callacame | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| 54    | Pte Ramis             | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 31,000 |
| 55    | Puno Enafer           | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| 56    | Río Verde             | HLG | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 31,000 |
| 57    | Limbaní               | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| 58    | Pte Isla Cabanillas   | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| 59    | Pte Moyocache Lampa   | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| 60    | Pte Zapatlilla        | HLM | 0                               | 0                    | 0                  | 0                  | 0  | 0               | 0           | 0                           | 0                               | 0                      | 0                            | 0                   | 0                   | 0                      | 0           | 0                      | 0                          | 0                        | 0          | 0            | 0          | 0          | 0          | 0              | 0           | 0          | 0               | 0           | 0     | 0         | 0 | 0       | 0      |
| TOTAL |                       |     | 0                               | 200                  | 0                  | 3,000              | 0  | 10,750          | 350         | 8,800                       | 4,800                           | 5,100                  | 90,200                       | 5,940               | 10,000              | 13,170                 | 16,000      | 0                      | 155,000                    | 0                        | 8,200      | 0            | 85,050     | 23,532     | 6,185      | 8,350          | 26,600      | 3,640      | 45,080          | 0           | 0     | 0         | 0 | 529,947 |        |

CUADRO Nº 22  
RESUMEN DEL REQUERIMIENTO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO

| Nº | DIRECCIÓN REGIONAL | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                 |             |                             |                                 |                        |                              |                     |                     |                        |             |                        | INSTRUMENTOS DE REGISTRO   |                  |            |              |            |            |            |                |             |            |                 |             |           |
|----|--------------------|---------------------------------|----------------------|--------------------|--------------------|--|-----------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-----------------|-------------|-----------|
|    |                    | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MINIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MINIMA A 10 cm. JUNTO AL SUELO | HIDROTERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMNIMÉTRICA (m.) | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO |
| 1  | Piura              | 0                               | 0                    | 0                  | 1                  | 1  | 23              | 5           | 31                          | 9                               | 3                      | 28                           | 10                  | 3                   | 11                     | 6           | 0                      | 1                          | 2                | 4          | 3            | 17         | 0          | 3          | 4              | 6           | 0          | 14              | 1           | 0         |
| 2  | Lambayeque         | 0                               | 0                    | 0                  | 0                  | 0  | 43              | 1           | 43                          | 6                               | 5                      | 39                           | 4                   | 6                   | 13                     | 5           | 0                      | 0                          | 0                | 6          | 0            | 27         | 2          | 0          | 5              | 13          | 0          | 23              | 0           | 0         |
| 3  | Cajamarca          | 2                               | 1                    | 0                  | 0                  | 0  | 24              | 3           | 22                          | 6                               | 0                      | 20                           | 3                   | 1                   | 2                      | 1           | 0                      | 1                          | 0                | 0          | 0            | 13         | 0          | 7          | 0              | 9           | 0          | 17              | 1           | 1         |
| 4  | Lima               | 2                               | 0                    | 1                  | 2                  | 1  | 40              | 0           | 39                          | 15                              | 6                      | 36                           | 7                   | 8                   | 22                     | 11          | 2                      | 2                          | 2                | 2          | 1            | 23         | 2          | 0          | 8              | 53          | 0          | 20              | 1           | 2         |
| 5  | Ica                | 0                               | 0                    | 0                  | 0                  | 1  | 29              | 3           | 29                          | 8                               | 0                      | 20                           | 7                   | 1                   | 3                      | 3           | 10                     | 4                          | 1                | 0          | 2            | 14         | 2          | 1          | 2              | 9           | 1          | 14              | 2           | 2         |
| 6  | Arequipa           | 2                               | 3                    | 0                  | 6                  | 12   | 41              | 2           | 38                          | 11                              | 8                      | 35                           | 5                   | 1                   | 6                      | 4           | 2                      | 3                          | 2                | 0          | 1            | 26         | 3          | 1          | 3              | 2           | 1          | 25              | 3           | 3         |
| 7  | Tacna              | 3                               | 0                    | 0                  | 4                  | 5  | 24              | 1           | 21                          | 0                               | 1                      | 21                           | 3                   | 1                   | 10                     | 2           | 0                      | 4                          | 1                | 1          | 4            | 11         | 2          | 0          | 1              | 8           | 0          | 17              | 1           | 1         |
| 8  | Loreto             | 3                               | 0                    | 0                  | 1                  | 0  | 19              | 9           | 19                          | 2                               | 0                      | 10                           | 10                  | 3                   | 1                      | 3           | 4                      | 0                          | 0                | 2          | 0            | 8          | 4          | 2          | 1              | 16          | 0          | 8               | 0           | 0         |
| 9  | San Martín         | 0                               | 0                    | 0                  | 0                  | 1  | 22              | 1           | 6                           | 0                               | 0                      | 14                           | 0                   | 1                   | 5                      | 1           | 0                      | 2                          | 1                | 1          | 0            | 12         | 0          | 3          | 1              | 9           | 0          | 17              | 1           | 1         |
| 10 | Huanuco            | 0                               | 0                    | 0                  | 0                  | 1  | 18              | 0           | 5                           | 1                               | 9                      | 6                            | 0                   | 5                   | 3                      | 5           | 0                      | 2                          | 0                | 1          | 0            | 3          | 3          | 1          | 3              | 0           | 0          | 2               | 1           | 1         |
| 11 | Junín              | 0                               | 1                    | 0                  | 0                  | 1  | 39              | 0           | 32                          | 9                               | 3                      | 22                           | 0                   | 1                   | 1                      | 3           | 0                      | 0                          | 2                | 1          | 2            | 20         | 2          | 2          | 1              | 2           | 0          | 20              | 1           | 2         |
| 12 | Cusco              | 2                               | 2                    | 0                  | 1                  | 2  | 27              | 1           | 19                          | 7                               | 1                      | 13                           | 1                   | 6                   | 14                     | 6           | 9                      | 1                          | 2                | 2          | 0            | 4          | 4          | 1          | 6              | 2           | 0          | 4               | 2           | 2         |
| 13 | Puno               | 0                               | 1                    | 0                  | 3                  | 0  | 43              | 1           | 44                          | 5                               | 3                      | 41                           | 6                   | 2                   | 6                      | 2           | 0                      | 5                          | 0                | 1          | 0            | 35         | 12         | 1          | 1              | 4           | 2          | 23              | 0           | 0         |
|    | TOTAL              | 14                              | 8                    | 1                  | 18                 | 25   | 392             | 27          | 348                         | 79                              | 39                     | 305                          | 56                  | 39                  | 97                     | 52          | 27                     | 25                         | 13               | 21         | 13           | 213        | 36         | 22         | 36             | 133         | 4          | 204             | 14          | 15        |

**CUADRO N° 23**  
**RESUMEN DEL REQUERIMIENTO VALORIZADO DE INSTRUMENTAL HIDROMETEOROLÓGICO AL LARGO PLAZO**

| N°    | DIRECCIÓN REGIONAL | INSTRUMENTOS DE LECTURA DIRECTA |                      |                    |                    |  |                  |             |                             |                                 |                        |                              |                     |                     |                        |             | INSTRUMENTOS DE REGISTRO |                            |                  |            |              |            |            |            |                |             |            | TOTAL US \$ |                 |             |                     |
|-------|--------------------|---------------------------------|----------------------|--------------------|--------------------|--|------------------|-------------|-----------------------------|---------------------------------|------------------------|------------------------------|---------------------|---------------------|------------------------|-------------|--------------------------|----------------------------|------------------|------------|--------------|------------|------------|------------|----------------|-------------|------------|-------------|-----------------|-------------|---------------------|
|       |                    | TERMÓMETRO DE MÁXIMA            | TERMÓMETRO DE MÍNIMA | PSICROMETRO ASSMAN | PSICROMETRO AUGUST | TERMOMETRO DE MÍNIMA A 10 cm. JUNTO AL SUELO | HIDROTHERMOMETRO | PLUVIOMETRO | PLUVIOMETRO JUNTO AL TANQUE | TANQUE DE EVAPORACION CLASE "A" | ANEMOMETRO TOTALIZADOR | ANEMOMETRO A NIVEL DE TANQUE | VELETA ANEMOMÉTRICA | BAROMETRO MERCURIAL | JUEGO DE GEOTERMOMETRO | PIRANOMETRO | MIRA LIMINIMÉTRICA (m.)  | CORRENTOMETRO Y ACCESORIOS | ANEMOCINEMOGRAFO | ANEMOGRAFO | EVAPORIGRAFO | HELIOGRAFO | HIGROGRAFO | LIMNIGRAFO | MICROBAROGRAFO | PLUVIOGRAFO | TERMOGRAFO |             | TERMOHIGROGRAFO | TENSIOMETRO | LISIMETRO           |
| 1     | Piura              | 0                               | 0                    | 0                  | 1,000              | 200  | 5,750            | 1,750       | 6,200                       | 8,640                           | 5,100                  | 61,800                       | 9,900               | 15,000              | 24,145                 | 48,000      | 0                        | 31,000                     | 50,718           | 32,800     | 12,780       | 41,310     | 0          | 18,555     | 33,400         | 39,900      | 0          | 27,440      | 100             | 0           | 475,288.00          |
| 2     | Lambayeque         | 0                               | 0                    | 0                  | 0                  | 0  | 10,750           | 350         | 8,600                       | 5,760                           | 8,500                  | 85,800                       | 3,960               | 30,000              | 28,535                 | 40,000      | 0                        | 0                          | 0                | 49,200     | 0            | 65,610     | 3,922      | 0          | 41,750         | 86,450      | 0          | 45,080      | 0               | 0           | 514,267.00          |
| 3     | Cajamarca          | 400                             | 200                  | 0                  | 0                  | 0  | 6,000            | 1,050       | 4,400                       | 5,760                           | 0                      | 44,000                       | 2,970               | 5,000               | 4,390                  | 8,000       | 0                        | 31,000                     | 0                | 0          | 0            | 31,590     | 0          | 43,295     | 0              | 59,850      | 0          | 33,320      | 100             | 4,600       | 285,925.00          |
| 4     | Lima               | 400                             | 0                    | 1,500              | 2,000              | 200  | 10,000           | 0           | 7,800                       | 14,400                          | 10,200                 | 79,200                       | 6,930               | 40,000              | 48,290                 | 88,000      | 140                      | 62,000                     | 50,718           | 16,400     | 4,260        | 55,890     | 3,922      | 0          | 66,800         | 352,450     | 0          | 39,200      | 100             | 9,200       | 970,000.00          |
| 5     | Ica                | 0                               | 0                    | 0                  | 0                  | 200  | 7,250            | 1,050       | 5,800                       | 7,680                           | 0                      | 44,000                       | 6,930               | 5,000               | 6,585                  | 24,000      | 700                      | 124,000                    | 25,359           | 0          | 8,520        | 34,020     | 3,922      | 6,185      | 16,700         | 59,850      | 1,820      | 27,440      | 200             | 9,200       | 426,411.00          |
| 6     | Arequipa           | 400                             | 600                  | 0                  | 6,000              | 2,400  | 10,250           | 700         | 7,600                       | 10,560                          | 13,600                 | 77,000                       | 4,950               | 5,000               | 13,170                 | 32,000      | 140                      | 93,000                     | 50,718           | 0          | 4,260        | 63,180     | 5,883      | 6,185      | 25,050         | 13,300      | 1,820      | 49,000      | 300             | 43,500      | 540,566.00          |
| 7     | Tacna              | 600                             | 0                    | 0                  | 4,000              | 1,000  | 6,000            | 350         | 4,200                       | 0                               | 1,700                  | 46,200                       | 2,970               | 5,000               | 21,950                 | 16,000      | 0                        | 124,000                    | 25,359           | 8,200      | 17,040       | 26,730     | 3,922      | 0          | 8,350          | 53,200      | 0          | 33,320      | 100             | 4,600       | 414,791.00          |
| 8     | Loreto             | 600                             | 0                    | 0                  | 1,000              | 0  | 4,750            | 3,150       | 3,800                       | 1,920                           | 0                      | 22,000                       | 9,900               | 15,000              | 2,195                  | 24,000      | 280                      | 0                          | 0                | 16,400     | 0            | 19,440     | 7,844      | 12,370     | 8,350          | 106,400     | 0          | 15,680      | 0               | 0           | 275,079.00          |
| 9     | San Martín         | 0                               | 0                    | 0                  | 0                  | 200  | 5,500            | 350         | 1,200                       | 0                               | 0                      | 30,800                       | 0                   | 5,000               | 10,975                 | 8,000       | 0                        | 62,000                     | 25,359           | 8,200      | 0            | 29,160     | 0          | 18,555     | 8,350          | 59,850      | 0          | 33,320      | 100             | 4,600       | 311,519.00          |
| 10    | Huanuco            | 0                               | 0                    | 0                  | 0                  | 200  | 4,500            | 0           | 1,000                       | 960                             | 15,300                 | 13,200                       | 0                   | 25,000              | 6,585                  | 40,000      | 0                        | 62,000                     | 0                | 8,200      | 0            | 7,290      | 5,883      | 6,185      | 25,050         | 0           | 0          | 3,920       | 100             | 4,600       | 229,973.00          |
| 11    | Junín              | 0                               | 200                  | 0                  | 0                  | 200  | 9,750            | 0           | 6,400                       | 8,640                           | 5,100                  | 48,400                       | 0                   | 5,000               | 2,195                  | 24,000      | 0                        | 0                          | 50,718           | 8,200      | 8,520        | 48,600     | 3,922      | 12,370     | 8,350          | 13,300      | 0          | 39,200      | 100             | 9,200       | 312,365.00          |
| 12    | Cusco              | 400                             | 400                  | 0                  | 1,000              | 400  | 6,750            | 350         | 3,800                       | 6,720                           | 1,700                  | 28,600                       | 990                 | 30,000              | 30,730                 | 48,000      | 630                      | 31,000                     | 50,718           | 16,400     | 0            | 9,720      | 7,844      | 6,185      | 50,100         | 13,300      | 0          | 7,840       | 200             | 9,200       | 362,977.00          |
| 13    | Puno               | 0                               | 200                  | 0                  | 3,000              | 0  | 10,750           | 350         | 8,800                       | 4,800                           | 5,100                  | 90,200                       | 5,940               | 10,000              | 13,170                 | 16,000      | 0                        | 155,000                    | 0                | 8,200      | 0            | 85,050     | 23,532     | 6,185      | 8,350          | 26,600      | 3,640      | 45,080      | 0               | 0           | 529,947.00          |
| TOTAL |                    | 2,800                           | 1,600                | 1,500              | 18,000             | 5,000  | 98,000           | 9,450       | 69,600                      | 75,840                          | 66,300                 | 671,000                      | 55,440              | 195,000             | 212,915                | 416,000     | 1,890                    | 775,000                    | 329,667          | 172,200    | 55,380       | 517,590    | 70,596     | 136,070    | 300,600        | 884,450     | 7,280      | 399,840     | 1,400           | 98,700      | <b>5,649,108.00</b> |



**CUADRO N° 24**  
**REQUERIMIENTO DE INFRAESTRUCTURA AL LARGO PLAZO**

| N°           | ESTACION                  | DIRECCION REGIONAL | SALA DE INSTRUMENTAL | SALA DE INSTRUMENTAL US \$ | TOTAL US \$       |
|--------------|---------------------------|--------------------|----------------------|----------------------------|-------------------|
| 1            | CP-Chalaco                | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 2            | CP- Mallares              | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 3            | CP-Ayabaca                | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 4            | CP-La Cruz                | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 5            | MAP-Miraflores            | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 6            | MAP-Cia Tumpis            | PIURA              | 1                    | 3,740.00                   | 3,740.00          |
| 7            | CP-Jaen                   | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 8            | CP-Talla                  | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 9            | CP-Huambos                | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 10           | CP-Lambayeque             | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 11           | CP-Tinajones              | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 12           | CP-Bambamarca             | LAMBAYEQUE         | 1                    | 3,740.00                   | 3,740.00          |
| 13           | CP-Andahuasi              | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 14           | CP-Cañete                 | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 15           | MAP-Huaraz                | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 16           | CP-Nicolas Franco Silvera | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 17           | CP-Cabana                 | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 18           | CP-Canta                  | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 19           | CP-Santa Rosa             | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 20           | CP-Donoso                 | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 21           | CP-Huacatambo             | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 22           | CP-Huarangal              | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 23           | CP-Paramonga              | LIMA               | 1                    | 3,740.00                   | 3,740.00          |
| 24           | CP-Don Carlos             | ICA                | 1                    | 3,740.00                   | 3,740.00          |
| 25           | CP-Characato              | AREQUIPA           | 1                    | 3,740.00                   | 3,740.00          |
| 26           | CP-Pampa Blanca           | AREQUIPA           | 1                    | 3,740.00                   | 3,740.00          |
| 27           | CP-La Yarada              | TACNA              | 1                    | 3,740.00                   | 3,740.00          |
| 28           | CP-Genaro Herrera         | LORETO             | 1                    | 3,740.00                   | 3,740.00          |
| 29           | CP-Mazán                  | LORETO             | 1                    | 3,740.00                   | 3,740.00          |
| 30           | CP-Moralillo              | LORETO             | 1                    | 3,740.00                   | 3,740.00          |
| 31           | CP-San Ramón              | SAN MARTIN         | 1                    | 3,740.00                   | 3,740.00          |
| 32           | CP-Pucallpa               | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 33           | MAP-Tulumayo              | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 34           | CP-Palmawasi              | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 35           | CP-Tocache                | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 36           | CP-Tingo María            | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 37           | CP-Tananta                | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 38           | CP-Uchiza                 | HUANUCO            | 1                    | 3,740.00                   | 3,740.00          |
| 39           | CP-Urubamba               | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 40           | CP-Quillabamba            | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 41           | CP-Pakitza                | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 42           | CP-Salvación              | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 43           | CP-Acjinaco               | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 44           | CP-Puerto Maldonado       | CUSCO              | 1                    | 3,740.00                   | 3,740.00          |
| 45           | CP-Chuquibambilla         | PUNO               | 1                    | 3,740.00                   | 3,740.00          |
| <b>TOTAL</b> |                           |                    | <b>45</b>            | <b>168,300.00</b>          | <b>168,300.00</b> |



| <u>Actividad</u>                      | <u>Financiamiento</u>  |
|---------------------------------------|------------------------|
| Equipamiento de instrumentos          | 5'649,108.00           |
| Construcción de salas de instrumental | <u>168,300.00</u>      |
|                                       | <b>\$ 5'817,408.00</b> |

De acuerdo a los montos en el corto, mediano y largo plazo se llega a determinación que el SENAMHI, requiere la suma de 8'209,739.32 Dólares Americanos para rehabilitar y proyectar la red nacional de estaciones meteorológicas e hidrológicas, tanto convencionales como automáticas, el cual se detalla a continuación:

| <u>Meta</u>   | <u>Financiamiento</u>      |
|---------------|----------------------------|
| Corto plazo   | <b>729,921.77</b>          |
| Mediano plazo | <b>1,662,409.55</b>        |
| Largo plazo   | <b><u>5'817,408.00</u></b> |
|               | <b>\$ 8'209,739.32</b>     |

**RESUMEN  
PLAN A CORTO PLAZO**

| N°           | TOTAL INSTRUMENTAL US \$ | TOTAL INFRAESTRUCTURA US \$ | TOTAL GENERAL     |
|--------------|--------------------------|-----------------------------|-------------------|
| 1            | 693,830.00               | 36,091.77                   | 729,921.77        |
| <b>TOTAL</b> |                          |                             | <b>729,921.77</b> |

**RESUMEN  
PLAN A MEDIANO PLAZO**

| N°           | ACTIVIDAD   | MONTO US \$         |
|--------------|---|---------------------|
| 1            | Equipamiento de instrumental Convencional P.I. 2008         | 866,070.00          |
| 2            | Infraestructura requerida P.I. 2008                         | 81,089.64           |
| 3            | Equipamiento de instrumental para contrastación EMA (Davis) | 133,250.00          |
| 4            | Equipamiento de instrumental para contrastación EHA         | 355,790.00          |
| 5            | Mejoramiento de infraestructura para EHA                    | 54,406.80           |
| 6            | Mejoramiento de infraestructura en general                  | 97,294.73           |
| 7            | Reubicación de estaciones convencionales                    | 74,508.38           |
| <b>TOTAL</b> |   | <b>1,662,409.55</b> |

**RESUMEN  
PLAN A LARGO PLAZO**

| N° | DIRECCIÓN REGIONAL | TOTAL INSTRUMENTAL US \$ | TOTAL INFRAESTRUCTURA US \$ | TOTAL GENERAL US \$ |
|----|--------------------|--------------------------|-----------------------------|---------------------|
| 1  | Piura              | 475,288.00               | 22,440.00                   | 497,728.00          |
| 2  | Lambayeque         | 514,267.00               | 22,440.00                   | 536,707.00          |
| 3  | Cajamarca          | 285,925.00               | 0.00                        | 285,925.00          |
| 4  | Lima               | 970,000.00               | 41,140.00                   | 1,011,140.00        |
| 5  | Ica                | 426,411.00               | 3,740.00                    | 430,151.00          |
| 6  | Arequipa           | 540,566.00               | 7,480.00                    | 548,046.00          |
| 7  | Tacna              | 414,791.00               | 3,740.00                    | 418,531.00          |
| 8  | Loreto             | 275,079.00               | 11,220.00                   | 286,299.00          |
| 9  | San Martín         | 311,519.00               | 3,740.00                    | 315,259.00          |
| 10 | Huanuco            | 229,973.00               | 26,180.00                   | 256,153.00          |
| 11 | Junín              | 312,365.00               | 0.00                        | 312,365.00          |
| 12 | Cusco              | 362,977.00               | 22,440.00                   | 385,417.00          |
| 13 | Puno               | 529,947.00               | 3,740.00                    | 533,687.00          |
|    | <b>TOTAL</b>       | <b>5,649,108.00</b>      | <b>168,300.00</b>           | <b>5,817,408.00</b> |

**RESUMEN GENERAL**

| META               | FINANCIAMIENTO      |
|--------------------|---------------------|
| 1 CORTO PLAZO      | 729,921.77          |
| 2 MEDIANO PLAZO    | 1,662,409.55        |
| 3 LARGO PLAZO      | 5,817,408.00        |
| <b>TOTAL US \$</b> | <b>8,209,739.32</b> |